

Vol. 5 No. 4



\$1.95

CURRENT NOTES

The Newsletter For ATARI Owners

Published By

ACE

The Washington Area
Atari
Computer
Enthusiasts

Special Features

ATARI 130XE ARRIVES!
ANTIC'S 520ST
DISK OPERATING SYSTEMS
DOS XL
SPARTADOS
ATARI DOS 2.5
OPEN ARCHITECTURE

Regular Features

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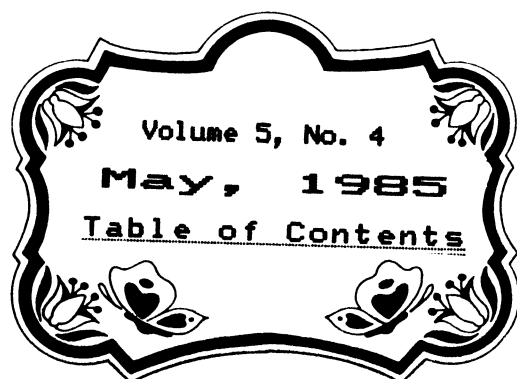
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News and Articles

The Atari 130XE Arrives! (M. Barnes).....	6
ANTIC's Development 520ST (J. Powell).....	7
Open Architecture (J. Barnes).....	8
Disk Operating Systems: An Introduction (J. Waters)..	10
Creating an Atari Double Density DOS.....	10
DOS XL, by OSS (J. Waters).....	11
SpartaDOS (J. Holtzhauer).....	16
DOS 2.5 to the Rescue (E. Clausen).....	20
ARMUDIC Is Back Up! (T. Bell).....	27
Bounty Bob Strikes Back (J. Smith).....	29
Indus Programming Contest (J. Simmons).....	31
In Defense of ACTION! (M. Gancarz).....	33

Regular Features

Letters to the Editor.....	4
GameViews (R. Gabeler).....	22
Tips 'N Traps (Stevenson, Francese, & Burke).....	22

ACTION! Action (J. Smith).....	23
Atari Scuttlebits (B. Kelly).....	24
Going Online (E. Seward).....	26
New Products (J. Holtzhauer).....	28
Secret Sunnyvale Correspondent (?).....	30

Club News

AURA: Atari Users Regional Association.....	34
WACUG: Woodbridge Atari Computer Users Group.....	34
CPM: Capital Pro Micro-Users Group.....	35
NOVATARI: Northern Virginia Atari Users Group.....	37
Subscription/Membership Form.....	38
Club Officers and Meeting Times.....	39

Advertisers

CLASSIFIED ADS.....	20
Applied Computer Associates (301) 948-0256.....	30
Automated Office Products (301) 927-9101.....	9
L & Y Electronics (703) 494-3444.....	18
LHK Enterprises (301) 839-7377.....	25
Fairfax Computer Products (703) 691-1930.....	27
Galfal Software (703) 379-7850.....	35
Maximus, Inc. (703) 734-4200.....	40
Optimized Systems Software (408) 446-3099.....	5
Printers Plus (703) 370-7810 or (703) 691-0067.....	36
The Program Store (703) 536-5040.....	32
Robins (703) 560-5900.....	29
STS-Video Supply (703) 237-0558.....	15
SWP Microcomputer Products (817) 924-7759.....	2
Systems Furniture Gallery (703) 522-6556.....	12
XLENT Software (703) 644-8881.....	21

Current Notes

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Editor's Notes

Last month's issue of Current Notes marked the end of my first year as editor. Needless to say, it has been a very, very busy year. When I was a columnist writing for our previous editor, I used to wonder why the Staffan didn't write more for the newsletter. I know now. It takes a good deal of time each month to see an issue through from start to finish. Needless to say, after my first two issues, I gave up the column and offered only a few articles during the year. Yet Current Notes continued to grow and expand. During the past year, enough material has appeared in these pages to fill a 500-page book! Excluding the information found under club news, almost 140 articles appeared in Current Notes in the past 10 issues. Where did it all come from? It came from a great many people.

It came from our regular columnists. Jay Gerber (Musical Notes and the earlier Nibbles & Bits) and Bob Kelly (Atari Scuttlebits) have been with me the whole year. Evan Brooks (Battle Bytes) joined in September and the "Secret Sunnyvale Correspondent" followed in October. Over the course of the year five additional columnists have been added: Stevenson, Francese, and Burke (Tips N Traps), Roland Gabeler (Gameviews), Jon Smith (ACTION! Action), Ed Seward (Going Online), and Jack Holtzhauer (New Products). We all owe these gentlemen a great vote of thanks for the excellent job they have done. I know they put in long hours each month to bring us the benefit of their insights and experience. Each has contributed significantly to making Current Notes a better newsletter.

Regular columns, however, are not the whole story. We have run an equal number of special features over the past year contributed by over two dozen club members. Some of these have been relatively short notes or hints while others have been feature-length articles or product reviews. The quality of these submissions has been, on the whole, quite good. In fact, the reviews of SynFile, SynCalc, and SynTrend that first appeared in our November issue are being reprinted in the upcoming June issue of ANALOG. Once again, thanks are due to all those club members who have contributed their time and effort to producing special features for the newsletter.

The above two categories account for roughly 75 percent of the articles. The remainder were taken from outside sources such as other newsletters or from reports published on CompuServe. The growth of the Atari information net on CompuServe and other online services has been a great help in allowing me to bring our readers the latest possible Atari news and information.

I do not want to forget all the many contributors who have provided the content of the club news sections this past year or those who have helped out behind the scenes. John Lauer has spent many long hours trying to automate our growing mailing list and Ed Seward has taken on the task of labeling and sacking the issues prior to taking them to the post office. I want to personally thank them and all the contributors for making this past year a success.

Jpc Waters

Letters to the Editor

Joe,

It has come to my attention that a number of people don't understand what BASIC-XL is, as opposed to Atari BASIC. I would like to clarify this so anyone interested in joining the BASIC-XL Special Interest Group know what this group is working with. Of course, anyone in WAACE is welcome to join, even if they don't own BASIC-XL (yet...).

The Atari computer line, since the days of the 400/800 models to the present XL/XE line, has had available a language that was both easier to learn than most languages and was still reasonably powerful. This was Atari BASIC written by Bill Wilkinson and others and supplied by Atari in either cartridge form or built-in to the XL/XE models.

Well, as many early Atari owners know, this version of BASIC was limited in a number of areas, including string handling, player/missile graphics (PMG), listing format and device input/output (I/O). These limitations are there because of the cartridge memory size restrictions placed on the original authors by Atari.

Well, Bill Wilkinson and his fellow programmers at Optimized Systems Software (OSS) figured that a more powerful version of BASIC would be needed for the Atari. Hardware designers at OSS developed what is now known as the Supercartridge. In the same memory space as the original Atari BASIC cartridge, OSS put a 16,384 byte program using a technique called "bank switching." Thus was born BASIC-XL, a BASIC with four dozen new statements and functions. And new functions can be added (see BASIC-XL Toolkit Disk).

The new commands include functions for PMG control (PMCLR, PMMOVE, MOVE, MISSILE, BUMP, etc.), program control/entry (NUM, RENUM, TRACE, SET, WHILE, etc), I/O (PEN, HSTICK, VSTICK, BGET, BPUT, etc.) and many others!

As you can see, there is a big difference between the two languages, with BASIC-XL being much more powerful. If a program is written in Atari BASIC without particular "tricks," it will be completely compatible with OSS's BASIC-XL. But, the program will run FASTER. Also, if the command "FAST" is entered in the beginning of the program, speed increases on the order of 4:1 can be seen!

Well, hopefully, this will help clear up some of the confusion between OSS's BASIC-XL and Atari BASIC on the XL. You now see why I am sooooo ecstatic about BASIC-XL on the Atari. Starting the SIG was a way to help promote the use of this faster BASIC.

Terry White
BASIC-XL SIG



What's the BASIC difference between these programs?

LVAR

```
32000 OPEN #7,8,0,"E:":QQ=128:POKE 201,8
32010 FOR Q=PEEK(130)+256*PEEK(131)
      TO PEEK(132)+256*PEEK(133)-1
32020 IF PEEK(Q)<128 THEN PUT #7,PEEK(Q):NEXT Q
32030 PRINT #7;CHR$(PEEK(Q)-128):PRINT #7;" ";:QC=0
32040 QA=PEEK(136)+256*PEEK(137)
32050 QN=PEEK(QA)+256*PEEK(QA+1):QL=PEEK(QA+2):
      QSV=QA:QA=QA+3
32060 IF QN>32767 THEN PRINT #7:GOTO 32190
32070 QS=PEEK(QA):QT=PEEK(QA+1):QA=QA+2
32080 IF QT>1 AND QT<55 THEN 32100
32090 QA=QSV+QL:GOTO 32050
32100 IF PEEK(QA)<>QQ THEN 32130
32110 PRINT #7;QN,:QC=QC+1:IF QC>3 THEN PRINT #7:
      PRINT #7;" ";:QC=0
32120 GOTO 32090
32130 IF PEEK(QA)>15 THEN 32160
32140 IF PEEK(QA)=14 THEN QA=QA+6:GOTO 32160
32150 QA=QA+PEEK(QA+1)+1
32160 QA=QA+1:IF QA<QSV+QS THEN 32100
32170 IF QA<QSV+QL THEN 32070
32180 GOTO 32050
32190 QQ=QQ+1:NEXT Q:STOP
```

ABOUT 30 MINUTES...

A beginner wrote the line on the left in a few seconds using BASIC XL. Even an expert would need half an hour or more to produce the same results using the Atari BASIC routine on the right.

ONLY WITH BASIC XL CAN ONE LINE DO SO MUCH!

BASIC XL requires 16K and comes complete with reference manual, reference card, and OSS SuperCartridge for **\$79.00**

Ever want to know every place where each variable is used in one of your Atari BASIC programs? Add the lines on the right to your program and type GOTO 32000. A complete cross reference will be sent to your printer. (Or change "E:" to "P:" in line 32000 to send it to the printer.) Of course, if you owned BASIC XL you could do the same thing **60 times as fast** by using that single command on the left.

BASIC XL is available at these local dealers:

APPLIED COMPUTER ASSOCIATES (948-0256)

16220 Frederick Ave., Gaithersburg, MD 20879

L & Y ELECTRONICS (494-3444)

13670 Jefferson Davis Hwy., Woodbridge, VA 22191

THE PROGRAM STORE (536-5040)

6201 Arlington Boulevard, Falls Church, VA 22044

STS-VIDEO SUPPLY (237-0558)

1073 W. Broad Street, Falls Church, VA 22046



Optimized Systems Software, Inc.

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The Atari 130XE Arrives!

by Michael C. Barnes, Vice President, XLENT Software

I have just had a few hours to sit down with my new Atari 130XE computer. I have owned an Atari 400, Atari 800 and two Atari 800XL computers. I never met an Atari computer I didn't like. This includes the ill-fated 1200 which I felt had a very nice keyboard layout (its ghost still lingers in the operating system diagnostics) and the screen was the clearest I had ever seen for a micro connected to a TV.

The Atari 130XE is the sexiest computer Atari has ever made. The color of the computer is a light grey. The HELP, START, SELECT, OPTION and RESET keys are placed directly above the number keys. The rest of the keys are arranged pretty much like the keys of the Atari 800XL. The keys are marked with letters and the graphic symbols for that key. I believe that this keyboard is better than the 800XL keyboard. It is a little spongier than the keyboard on the 800.

I purchased my 130XE for \$169.95 at L & Y Electronics in Woodbridge, Virginia. I was told that I had picked up their last of 15 Atari 130XE's. The serial number of my 130XE was 1447. John of L & Y said that only 2,000 130XE's were shipped in the first batch.

My first instinct was to test the Atari 800XL with my large collection of Atari software. I opened my old copy of Text Wizard. I blew off the dust on the cover. I had not used it since AtariWriter was released. Text Wizard did not work on my 800XL. I was not surprised when it didn't work on the 130XE either. I booted the Translator disk and found that Text Wizard now worked.

All of the software that worked on the 800XL worked just fine. This means that if you are upgrading from the Atari 800 some of your software may not work. On the other hand, any program that now runs on the Atari 800XL will also work on the 130XE.

As Vice President of XLENT Software, I talk to the people at Atari quite frequently. I have been told that eventually, the 130XE will be the only 8 bit computer in the Atari line. Atari will not release any of the 64K machines. This is probably just as well. For about the same price as a Commodore 64, you can own the "128K" 130XE. Atari has hinted that the price will drop to \$140.00.

The Atari 130XE cannot directly access all 128K of memory. The instructions that come with the 130XE direct the user to page 121 to discuss the full ram potential of the 130XE. While the directions for using the extra memory are very sparse, most programmers should be able to figure it out.

Asking me about any Atari computer is like asking any father about his son. I cannot be objective. Although I own eight computers, I still enjoy the Atari the most. The Atari is an old friend to me. I cannot say I cut my

teeth on the Atari as I had purchased two computers prior to owning my Atari 800. I can say that the Atari was the first computer that I had any fun with.

I will say that the Atari 130XE stacks up well against the other Ataris I have owned. There are many people who feel that the 800 was the best computer Atari ever produced. I will not argue that the Atari 800 set standards that much of the industry has not been able to live up to in terms of ease of use, ease of connecting peripherals, graphics, keyboard layout, etc. However, the Atari 800 was not designed to compete in today's aggressive markets. The 800 was too expensive to build. The 1200XL was the first step Atari took in reducing the cost of producing computers. Unfortunately, Atari did not take several things into consideration. The cartridge slot was too small to accept many third party cartridges. Many programs did not boot that once worked on the 800. The 1200XL received boos and hisses from reviewers. John Anderson wrote several very critical articles about the Atari 1200XL in Creative Computing. In all fairness to Atari, the Atari 1200XL was more compatible with the 800 than the then recently released Apple IIe was to the Apple II. Somehow, Apple got away with it and Atari did not.

The 800XL received a friendlier reception. It was not all that different from the 1200XL. It was less expensive, had less keys, and was packaged with BASIC in the computer. The Operating System appeared to be just about the same (although, I have never seen a memory map of either computer).

I put the RAM ROD XL board into my 800XL computer. This gave me full compatibility with the 800, the new 800XL operating system and the ability to call up either 80 columns or a RAM resident disk monitor. With these enhancements, I found that it made little difference if I used the 800 or the 800XL except that the 800 seemed to have a better keyboard feel and that the screen was sharper using the 800.

The Atari 130XE appears to have the same screen sharpness that I remember from the 1200XL. It is much sharper than the 800XL and somewhat better than the 800. The keyboard is better feeling than the 800XL. The 800 is still my favorite for keyboard feel.

It is my opinion, given the choice to buy a used 800, a new 800XL (at \$99.95) or a new 130XE (at \$169.95), the 130XE is the best choice. While it may be a few months before any software packages take advantage of the extra 64K of memory, it won't do any harm to leave it in the machine unused. The 130XE appears to be a higher quality product than the 800XL. The keyboard is better, the screen is clearer, the documentation is infinitely better, and the XE looks nicer.

(Continued on page 7)

ANTIC's Development 520ST

by Jack Powell, ANTIC Technical Editor

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Our Atari 520ST just arrived in the Antic offices. This is the \$5,500 development package, and it includes the computer, two 3 1/2" disk drives, one medium resolution (640 X 200) RGB analog monitor, and one mouse.

The software in the package is the "C" compiler, machine language assembler and debugger by Digital Research, the Mince screen editor by Mark of the Unicorn, Kermit -- a modem protocol program for file transfer, CP/M-68, and, of course, GEM -- which is in ROM in the machine.

On back order -- but expected soon -- is a high-resolution (640 X 400) monochrome monitor and a ten-megabyte hard disk. Along with all this came 1000 pages of documentation and since it will take some time to digest all of this, we thought you might like a first impression of this new, high-level Atari computer.

The development 520ST is a preliminary model and there will be some changes between now and the time you see it in the stores, but all parts of this machine were factory made in the same manufacturing plants as the final product will be. The only real difference -- besides the price -- is that these machines were hand assembled.

The first thing you notice when taking the ST out of its box, is that it's very light. Although somewhat larger in size than the 800XL, it feels lighter. This may be because the shielding has not yet been added.

It looks exactly like the ST on our May cover, but there are some details you can't see from the photograph. On the right edge of the machine, to the rear, are two joystick ports identical in appearance to current Atari joystick ports, except they are also used for the mouse.

=====

130XE (Continued from page 6)

Like many old Atari fans, I would like to see BASIC XL built-in, the fast chip included and the cursor controls speeded up. However, the 130XE was designed to be the best general purpose home computer. It was designed to set the standard for price performance at the lowest cost point for a computer. The 130XE does this as well as any computer.

In the next few months, software will begin to appear that will only run on the 130XE and not the older series. XLENT Software is already planning a package that will create graphic files that will use up 52K of memory. XLENT MegaFiler by Jerry Kuit is now undergoing reworking to use the extra memory provided by the 130XE. Other companies are likely to do the same. My advice, go out and buy an Atari 130XE.

On the left edge, rear -- opposite the joystick ports, is the cartridge slot. This will accept a 40-pin board -- 20 upper and 20 lower.

In back of the computer are various switches and ports, each labelled beneath and with an indicating icon etched in the plastic above. From left to right they are:

Reset - a small, square button.

Power - identical to previous Atari power switches.

Power In - 7-pin, male DIN.

MIDI Out - 5-pin, female DIN.

MIDI In - same as above.

Television - RCA, female.

Channel - mini-switch, labelled "L" "H".

Monitor - 13-pin, female DIN.

Printer - female D-25, IBM-PC/Centronics compatible.

Modem - male D-25, IBM compatible.

Floppy Disk - 14-pin, female DIN.

Hard Disk - female D-19.

Besides the standard keyboard and ten-key pad, are ten function keys, labelled F1 to F10. The isolated cursor section is particularly well designed with the lower three keys representing Left, Down and Right, and the Up arrow centered above them. On either side of the Up key are Insert and Clr/Home. The top two keys in the cluster -- which are enlarged -- are Help and Undo. The Undo key may become particularly useful.

The drives accept Sony 3 1/2" disks. To boot the machine, first turn on the drives and insert both disks before turning on the computer. A disk must be in a drive for the computer to later access that drive.

When booted, the GEM desktop appears as a light green background with pale blue border and black-outlined icons. In the upper right corner of the screen are two disk icons, one over the other, that look like file cabinet drawers. In the lower right corner of the screen is a trash can.

In the border area, above the upper left section of the green background, are the words, "DESK FILE VIEW OPTIONS." In the middle of the screen is a thin, black arrow-cursor which is moved by the mouse.

We'll save details on GEM for later articles. Suffice it to say, it is fast! It can redraw an entire screen of icons in the blink of an eye.

This is just a surface description of an exciting new machine. Antic wants to get the information out to you as soon as possible and we plan to share our ST experiences as they happen. Stay tuned for further details.

Open Architecture — One Consumer's Dream

by John Barnes, Vice President A.U.R.A.

Many of us who use our computers seriously take data from one program and put it into another to get the most out of it. This article is a plea to software vendors for software designs that allow us to do this freely. There is a tendency toward designing software that takes our work and locks it up so that we cannot make any further use of it. I also want to make consumers aware of the potential for enhanced creativity and productivity that results when the user is free to make his own choices.

For example, we feed text from a word-processor into a terminal emulator for sending to other machines. We use formatting programs to put Microillustrator files out to graphics printers. We create custom report forms from databases by writing a simple BASIC program. The list goes on and on. This kind of productivity enhancement is possible because the software architecture for these programs is "open". There are no artificial barriers to the movement of information. The authors of such programs use standard file formats and standard Disk Operating Systems. If the data can be read it can be used.

In contrast to these cases are those where the data lives entirely within a special environment created by the program that uses it. This kind of software environment is said to be "closed". Cartridge game programs are the obvious example. This is no great loss because there is rarely any need to rerun the program. Letter Perfect, Data Perfect, and Print Shop are examples of serious software packages that operate in a closed environment. Designers of closed environments use special Disk Operating Systems and bizarre file formats to seal the data off from the outside world. This is a shame because many serious users want to take data that has been created in some other way and use it in new combinations or for other purposes. The three programs named above require that the user input his data from the keyboard and allow him only to send it out to a printer. In fact the user cannot even list the contents of the directories on the disks created by these programs.

The use of closed software imposes limitations, often severe ones, on the consumer's ability to make optimum use of his creativity. Software consumers should be aware of the grief that they are inheriting by using closed software, but the limitations on usefulness imposed by this architecture are often not apparent until it is too late.

Some software vendors design closed systems in the arrogant belief that they can thereby create a captive market. They try to induce additional purchases by providing products to fill in the gaps in their earlier releases. Frustrated users who find the gaps will more often turn to other vendors or they will exercise their own creativity to find ways around the problems. I try to direct my repeat business to software creators who make it easy for me to reformat data files, to exchange data among machines, and to maintain my file archives in an orderly way. The open market is also a creative market. New geniuses can solve problems left by the old ones and con-

sumers will benefit from the availability of more powerful and useful products.

Of course ATARI computers are limited in the amount of memory and disk space that is available and software developers frequently trim something out to make room for something else. This is pardonable, but it can and should be done with a view to retaining compatibility. Consumer acceptance of the new generation of hardware will be greater if existing software can be used.

"Integrated Software" is a response to the reality that no one program can do everything. Integrated systems, such as Lotus 1-2-3, usually allow the data to be manipulated in several ways. They are usually partly closed, in that they do not allow easy sharing with programs outside of their universe. One component of the system may be very strong while another may be weak. Such systems are popular because they do not demand much knowledge from the user and they are very efficient in their use of the computer.

The subject of copy protection really has nothing to do with open software environments because it is possible to copy protect the vendor's product without locking the data that the user creates into a strongbox. The user's data belongs, after all, to the user. He should be free to use it in any way that suits him.

I hereby offer six simple rules to help protect the software buyer from the arrogance of those who inflect closed software upon us.

RULE #1 - No Alien DOS's. If you cannot read the files that the program creates using ATARI DOS, forget it. There is almost always an alternative product that does let you see what is on your disks and that lets you read the files with your own BASIC program, terminal emulator, or utility programs.

Rule #2 - Avoid Bizarre File Structures. The simplest file structures that we use are those created by BASIC PRINT or LIST statements. They have end of record marks and all of the data are in the form of ASCII (or ATASCII) characters. The file created by the SAVE command in BASIC is an example of a bizarre file structure because it uses "tokens" to replace the English instructions that were input to the BASIC interpreter. This allows the interpreter to read the file quickly, but the file must be LISTED before it can be sent over a telephone line.

SYNFile, SYNCalc, and SYNGraph are also examples of programs that use bizarre file structures in their native modes, but they also provide utilities to create DIF files to transfer data between programs. This is only a partial solution because the DIF file usually does not carry as much information as the original. VISICALC, on the other hand, saves a spreadsheet as an ASCII file by writing out the commands that are used to build the sheet from scratch. The ASCII command structure also permits

other hand, saves a spreadsheet as an ASCII file by writing out the commands that are used to build the sheet from scratch. The ASCII command structure also permits people to write books containing VISICALC templates for many uses. The program loads spreadsheets slowly, but they can be exchanged with other machines. It is also easy to write programs that create loadable VISICALC spreadsheets. This is an outstanding example of open software architecture. Perhaps the authors of SYNCalc should provide a machine-readable ASCII command scheme for their product.

RULE #3 - Look for Expansion Capability. Customizing printer drivers by placing a suitable AUTORUN.SYS file on a DOS disk used with the ATARIWRITER cartridge is an excellent example of the kind of expansion capability that is available in an open software architecture. Software that recognizes the possibility for more than one disk drive or a RAMDISK possesses built-in expansion capability. Cartridge software, like the BASIC or ACTION! cartridges, that allows the user access to DOS to run other programs is expandable because the user can put his own mix of programs on his system disk to create a convenient operating environment to make full use of his data.

Software that blindly refuses to accept the possibility of such expansion frequently forces the user into tiresome disk swapping. This limitation will become more severe as more people acquire hard disks and become addicted to instant program loading.

RULE #4 - Learn the Real Capabilities of the Package. The fact that a new software package is supposed to be the hottest word processor around does not mean that it will work for you. The differences between the supposed capabilities and the real ones is often very large. Does it support your printer? Does it support the print attributes (subscripting, superscripting, underlining, etc.) that you need? Can you add your own vocabulary to the spelling dictionary?

An informed consumer is the best defense against poor software. Many of us have bought new software in the naive belief that it repairs the deficiencies of the old or that it was more flexible than it proved to be. If you cannot get written performance guarantees, wait until you have seen a review in a software magazine or, better yet, until you have had a chance to try a friend's copy of the software.

RULE #5 - Don't Buy Without a Demo. If the local computer store is not prepared to demonstrate a software package, find someone in your user group who has it or ask the officers to arrange for a vendor demo. Maybe you can get together with a couple of friends to purchase an initial copy of the package at a discount outlet so that you can get a good look at the documentation and try the program out on your own application. Restrictive merchandise exchange policies and retailer indifference to software performance are forcing many of us to take these and similar protective measures.

RULE #6 - Use Your Imagination. Once you have a program that is running nicely for doing your income tax, think about using it for other things. Spreadsheet programs allow the user to browse through and organize large amounts of data. It might be nice to have a master directory of all your disks on a spreadsheet or in a database manager. Inventories are another application in which it is nice to go back and forth between database management and spreadsheet formats because you can look at many database records simultaneously. Spreadsheets are a good way to make up tables for use in a written document. A simple BASIC program can often be used to reformat a database subfile into a report.

CONCLUSION

Many of the points developed above come from the perspective of a scientist who routinely uses powerful computers to perform complex tasks involving data from laboratory measurements and mathematical models. The modern consumer also faces problems in finance, education, home management, and technology that can be solved by harnessing the power of computers. Effective solutions to these problems will arrive much more quickly if we can use the available software tools in a unified manner rather than as fragments designed to attack narrow, sometimes trivial, problems. In order to achieve this unity one program must be able to pick up where another leaves off. This is possible only in an environment where data can be easily exchanged, i.e. an OPEN software environment.

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Disk Operating Systems: An Introduction

by Joe Waters, President NOVATARI

In the March issue of CURRENT NOTES, I described some of the features of Atari DOS 2.0S. This month, we take a look at several other popular DOSs: DOS XL by OSS, Sparta-DOS by ICD, and the new DOS 2.5 by Atari. We even present a little hint on how you can change Atari DOS 2.0S into Atari DOS 2.0D for double density. Before launching into a discussion of these various Disk Operating Systems, however, let's consider the question of why one might need an alternative DOS in the first place. Doesn't Atari DOS 2.0S have everything we need?

What's a "DOS" For Anyway? The DOS, or Disk Operating System, is a program that serves as the interface between you and the disk drive. This interface can be used from within a programming language such as BASIC or directly as when you choose a menu option from a DOS menu. Anytime you transfer data between computer memory and the disk drive, you are performing a disk drive operation. For example, when you try to save your program as a file on your diskette, it is the DOS that handles the data transfer and determines just where, physically, the information will be recorded on the floppy disk. Similarly, when you want to load your program into memory, DOS finds the appropriate file on the disk and moves it into memory. You, as a user, need never know where your data are physically stored just as long as you can get it whenever you need it. The DOS handles all the details of the data transfer for you.

Direct applications are operations that affect one or more specific disk files. For example, listing your file directory, deleting files, renaming files, protecting or unprotecting files, and copying files. To perform these file manipulations, the DOS creates and maintains a directory of the information on your diskette. The directory tells the DOS what files are on the disk, where they are physically located, and where space is available for new files. Indeed, the process of "initializing" a disk is nothing more than filling the disk with zeros, building the file directory, and indicating in the directory precisely where files are stored and where space is available for additional files.

Creating an Atari Double Density DOS

Here is a simple procedure for creating a double density Atari DOS. Note that it is not complete in that the "Duplicate Disk" (Option J) of the DOS menu will not perform a double density duplication. The DOS XL DUPDBL command can be used for that.

Step 1: Insert the Basic Cartridge, boot Atari 2.0S, type 'DOS' to go to DOS and then choose option 'B' to return to the cartridge.

Step 2: Poke location 1801 with a 6. [This allocates six 128-byte disk buffers and allows 3 open double density files, or 2 double, 2 single, etc.]

Atari DOS accomplishes these tasks with two files: DOS.SYS and DUP.SYS. DOS.SYS contains the "Disk Operating System" which loads itself into memory when you turn the computer on (assuming your disk drive is on first of course). DOS.SYS lets you boot up and access files on the diskette through various programming languages (BASIC, PILOT, LOGO, ACTION, etc.). The other DOS functions are contained in the DUP.SYS program (DUP stands for Disk Utility Programs). When you leave the cartridge environment (by typing DOS from Atari BASIC for example), the DUP.SYS program is loaded into memory and then takes control. This program shows you the standard Atari DOS 2.0S menu and performs the operations found in that menu.

Why Another DOS? Any alternative DOS must perform all of these same operations. So why get an alternative? Because the alternative DOS may perform these operations in a style you find more convenient, or perhaps perform the functions faster than Atari DOS, or perform the functions on a wider variety of disk drives. Atari DOS is menu-driven. Some people may prefer a direct-command language for disk drive operations rather than having to respond to menu prompts. Atari DOS takes a long time to load from BASIC. Other DOSs may reside in memory and pop-up instantly when they are called upon. On the other hand, once Atari DOS is up, it can perform a variety of functions while other DOSs may require additional programs be loaded to perform some of the standard DOS functions. Atari DOS 2.0S is for single density drives only. If your drive is capable of Atari's dual density, or true double density, and many of the new disk drives are, you will need an alternative DOS to take advantage of the enhanced storage capacity of your disk drive. (Although note the need trick described below.)

All of the various DOSs are going to perform the basic DOS functions. Which DOS you decide is the "best" is likely to be a matter of personal preference. Hopefully, the in-depth reviews provided here will help you evaluate the relative merits of each system for your own computing environment.

Step 3: Reset the density of your disk drive to double. On INDUS, simply use the control buttons on the drive. On a PERCOM, you may have to remove the disk, shut the drive off, set the switches on the back to default to DD when the drive is turned on, and then turn the drive on again.

Step 4: Press SYSTEM RESET and then enter:
X=USR(ADR("hLu "))
(no inverse, one space after the "u").

Step 5: Type 'DOS' to return to the DOS menu. Now insert a blank disk and format it using the 'I. FORMAT DISK' command.

Step 6: Write DOS to the disk with the 'H. WRITE DOS FILES' command. You now have a copy of Atari 2.0S in double density.

[Abstracted from *The Windover Project*, Jan/Feb 1985]

DOS XL, by OSS

by Joe Waters, President NOVATARI

DOS XL does everything Atari DOS 2.0S does, but, as you would expect, there are differences in how it accomplishes its tasks and also some things it can do that Atari DOS cannot do. Let me summarize briefly the major differences.

Double Density. Most important for owners of double density drives is that DOS XL can handle double as well as single density. For those of you who have single density drives, a true "double-density" drive is one that is capable of writing and reading twice as much information in the same space used by single density drives. All Atari-compatible double density drives can handle both double and single density diskettes.

The operating system is supplied on a double-sided disk. One side has DOS XL in single density while the other has DOS XL in double density. (If you start with only one of these variants, you can create a master disk of the opposite density.) If you want to work with double density, boot up with the double density disk. All of the commands in double density are exactly the same as those used in single density. Thus from a user's perspective, there are no major operational differences between using single or double density. The only problems likely to come up are in moving between densities (single to double or vice-versa), particularly in a one-drive system.

Command Processor. DOS XL provides two alternative interfaces for the user. You can use a menu system similar to the Atari DOS 2.0S menu or you can use a command-based system called CP. I'll discuss each of the formats below, but for now let me just say that the command mode can often accomplish your objectives quicker and easier than stepping through a series of menus and prompts.

Speed. DOS XL can perform some operations much faster than Atari DOS, and some operations slower. The primary difference is in the DOS.SYS file created by DOS XL. In both DOS XL and Atari DOS 2.0S, you need DOS.SYS on the disk to "boot" the disk. In both systems, you can interact with the disk drive through your BASIC programs if DOS.SYS is on the disk. In fact, the interaction via BASIC (loading/saving or entering/listing programs as well as all of your BASIC disk commands -- OPEN, CLOSE, NOTE, POINT, XIO, etc.) are identical in both systems.

The difference comes when you type DOS from BASIC. In Atari DOS, nothing will happen unless you have a DUP.SYS file on the disk. If you do, you wait about 8 seconds while the DUP.SYS program loads. Of course, this will destroy your BASIC program in memory. If you want to go back and forth between BASIC and DOS without losing your program you need to have the MEM.SAV file on your Atari 2.0S disk as well as DUP.SYS. Now your BASIC program is preserved but the trade-off is that it takes 30 seconds to go to DOS and another 8 seconds to return to BASIC. If you go back and forth often, you'll spend a lot of time waiting for DUP.SYS (and MEM.SAV) to load and run.

When you type the BASIC DOS command under DOS XL you are moved instantly to the disk operating system. Similarly, the CARTRIDGE command will move you instantly back to BASIC. No waiting. No loss of your BASIC program. Once you are in CP (the Command Processor mode), you can look at your directory, protect or unprotect files, and type, erase or rename files.

Space. In addition to the speed advantage, you also save disk space. Atari DOS.SYS is 39 sectors, DUP.SYS, 42 sectors and MEM.SAV, 45 sectors (a total of 126 sectors used up on your diskette). DOS.SYS in DOS XL is only 46 sectors -- a savings of 80 sectors of disk space. In addition, DOS XL can take advantage of the extra memory available in the 64K in the 800XL. If you implement this function (all you have to do is rename the file DOS)XL.XL to DOSXL.SYS on your diskette), BASIC starts out with 32,782 free bytes instead of the normal 28,430 bytes -- you gain an additional 4,352 bytes for your programs. Look at all those advantages -- less disk storage, more free memory, more speed, everything seems perfect.

Extrinsic Commands. Well, not exactly. Note that in the discussion of what you could do from DOS XL, I did not mention copy files, or duplicate disks, or initialize disks. The earlier commands I mentioned are all what OSS calls "intrinsic commands" to DOS XL. That means if you have DOS.SYS on the disk, the control program understands all these functions and can perform the requested actions. DOS XL also has what are called "extrinsic commands." The Copy, Duplicate, Initialize -- and the MENU for that matter -- are all extrinsic commands supplied with the DOS XL Master disk. What this means is that each of these commands is actually a separate program on the disk (with a file extension ".COM" for Command). When you give the command, DOS XL loads and runs the program represented by that command to perform the indicated action.

If you are going to perform these operations frequently, you have just lost some of the speed (and all of the storage) advantages provided by DOS XL. The COPY.COM program is 75 sectors; DUPDISK.COM is 11 sectors; INIT.COM is 6 sectors; RS232.COM is 1 sector. These programs together with DOS.SYS total 140 sectors -- 14 sectors more than the Atari DOS 2.0S programs. And while in Atari DOS 2.0S you have to wait for DUP.SYS to load, once it is loaded, you can start the copy, duplicate, or initialize functions instantly by choosing the appropriate menu option. In DOS XL, you have to wait for each particular program to load everytime you want to perform one of these functions. Thus, the use of "extrinsic" commands means that, for some functions, DOS XL actually takes longer than Atari DOS.

Flexibility. Don't let the "disadvantage" of extrinsic commands disconcert you too much, however, because the use of "extrinsic" commands provides another powerful advantage to DOS XL. There can be as many extrinsic commands as you like! Indeed, the master disk supplied by OSS comes with several more commands I haven't even men-

tioned. And what's more, a skilled user can make up his or her own commands.

Version 2.30

DOS XL has gone through several versions. The current implementation, DOS XL Version 2.30, is a direct successor to and completely file compatible with Atari DOS 2.0S, OS/A+ Version 2.0, OS/A+ Version 2.1, and DOS XL Version 2.2. DOS XL is available directly from OSS and is also supplied as the operating system included with a number of third-party double density disk drives.

Documentation. I recently received version 2.30 along with the DOS XL reference manual from OSS. I read through the whole manual and, to my surprise, found everything perfectly understandable. Either the manual had gotten a lot better, or experience combined with repeated reading had made everything seem so much clearer. In all fairness, I think the manual has, indeed, improved. It was 156 pages, about one third longer than the petite DOS XL Operator's Guide supplied by Indus with their disk drives. It certainly was clearer than the original OS/A+ manual that I received some four year ago.

System Bugs. In working with version 2.2 I had discovered some frustrating bugs in the system that crept up when you used the menu to initialize a diskette. It was possible to get around these bugs (more on that below) and I even began drafting an article explaining the work-around solution last summer but never had time to finish it. Well, with DOS 2.3 the first thing I did was try and duplicate the problem. It was gone. Everything in the latest version appears to be working just fine.

The DOS XL Menu.

You can use DOS XL via the command processor (called CP) or by using a menu program called MENU.COM. Let's look at the menu first. Figure 1 illustrates the DOS XL Menu. As you can see from the descriptions, it contains many of the same functions found in the Atari DOS 2.0S menu. Options in the Atari menu are listed with letters (A, ..., Q) and you choose an option by typing the letter, followed by [RETURN], and then providing whatever information is required by the resulting prompts. Options in the DOS XL menu are chosen by pressing the first letter of the word describing the particular option. You need not press the [RETURN] key.

DOS XL MENU version 2.30
copyright (c) 1983 OSS, Inc.

Files on Disk	Protect Files
To Cartridge	Unprotect Files
Copy Files	Rename File
Duplicate Disk	Save Binary
Erase Files	Load Binary
Initialize Disk	Go to Address
Xtended Command	Quit to DOS XL

Figure 1

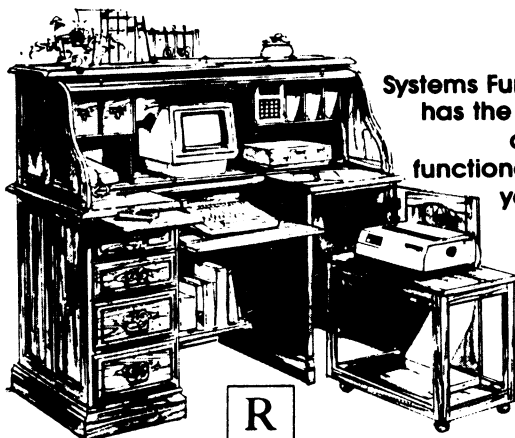
For example, to see a listing of the files on your disk, press "F" for "Files on Disk". This is equivalent to the "A. Disk Directory" option of Atari DOS. You will be prompted for any further search specification. You can respond by simply pressing [RETURN] and getting a list of all your files or narrowing the specification (e.g. *.BAS or TE* for a listing of all files with a file extension of "BAS" or all files beginning with the letters "TE").

Experienced users of Atari DOS should have no trouble using the DOS XL menu. The only options that look different are "Xtended Command" and "Quit to DOS XL". The Q option (Quit) takes you out of this menu program and moves you into the DOS XL CP environment. The X option allows you to execute a CP command from within the menu program. Unless you are familiar with DOS XL commands, you are not likely to use this X option.

The DOS XL Command Processor

When you boot a disk with DOS XL, the menu shown above will appear only if there is a file called MENU.COM on your disk. If the menu program is absent (and if you

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do not have an AUTORUN.SYS file or a STARTUP.EXC file), you are more likely to see the screen shown in figure 2.

```
DOS XL - Atari version 2.30
copyright (c) 1983 OSS, Inc.
```

```
D1:
```

Figure 2

Now what do you do? No menu. No prompts. Just a solitary D1: and a cursor waiting for you to do something. What you do is give the command processor a command. Try typing DIRECTORY and pressing [RETURN]. Sure enough, you are immediately presented with a directory of your disk files. Now you see how CP works. Just type out the command you want.

DOS XL Commands

DOS XL commands are represented by words such as "DIRECTORY" or "ERASE". The first three letters of any command are all that are really needed to indicate the command. Thus "DIR" is equivalent to typing "DIRECTORY". If a command requires additional information, such as a file name, you provide that information on the same line as the command. Thus, "ERASE JUNK.DAT" will erase the file called "JUNK.DAT". Below I will briefly discuss the more common intrinsic and extrinsic commands.

Intrinsic Commands

Default Disk Drive. The "D1:" prompt indicates the default disk drive. Any command you give will assume that it applies to files on drive 1 unless you specify otherwise. If you wanted to erase a file called JUNK.DAT on drive 2, you could type "ERASE D2:JUNK.DAT". You can, however, change the default drive by entering the new drive specification in the format "Dn:" where "n" is a number 1, 2, 3, or 4. Thus if you enter "D2:" the prompt will change from D1: to D2:. To go back to drive 1, just enter D1:.

Disk Directory. To view the disk directory, use the DIRectory command. The format is:

```
DIR [Dn:] [file specifier] [output file]
```

If the drive specification is omitted, the command will search the directory of the current default drive. A file specifier is either a filename or any combination of "wild-card" characters in a filename such as "*.BAS" or "/*.*" or "WORD?.DAT" or "TEST*" etc. If the file specifier is omitted, all files are listed. You can limit the search just as you do in Atari DOS as indicated above. If the output file is omitted, the files are listed to the screen. They don't have to be. To list all your files on drive 1 to the printer, you could enter:

```
DIR D1: P:
```

CAUTION: Specifying a disk file name as an output file will not generally work unless the output file is on

a diskette other than the one given or implied by the first file specifier.

Erasing a File. The ERASE command erases a file from your diskette. The format is

```
ERA [Dn:] file specifier
```

Be careful when using the command with wild-cards. Use the directory command first to see just what files are listed before you use the erase command. For example, if you are going to erase all your ".LST" files, enter "DIR *.LST" first to make sure that only files you want to eliminate are found with that particular file specifier. If the resulting list is what you expect, then you can enter "ERASE *.LST".

Protecting and Unprotecting Files. The PROtect command is used to protect a file from accidental erasure, writing, or renaming. If a file is protected, an asterisk will appear before the filename in the directory. the UNProtect command reverses the effect of the PROtect command. The format for both commands is similar to that of the erase command:

```
PRO [Dn:] file specifier
```

```
UNP [Dn:] file specifier
```

Renaming a File. Use the REName command to rename a file. The format is:

```
REN from-file-name to-file-name
```

Do not use wild-card characters when renaming files. If you do, you may find yourself creating more than one file with the same filename. If you encounter this problem, you may be able to escape by using the COPY command with the -Q option (see below) to copy each file to a different diskette where you can rename them again.

Loading Binary Files. The LOAd command is used to load a binary file from disk to memory. The format is:

```
LOAD [Dn:] filename
```

More and more machine language programs are coming available in the public domain. To create these programs, you often use a BASIC program which reads data from a long list of DATA statements and creates a binary file from the data. You would use this LOAD command to run that binary file.

Typing a File. The TYPE command can be used to type an ASCII or ATASCII file to the screen or to another output device. The format is:

```
TYPE [Dn:] filename [output file]
```

If you have a text file on your disk, for example program documentation, you can view the file on the screen by using the TYPE command. You can stop/start the screen display at any time by pressing CONTROL+I. To send the file "AMODEM.DOC" to the printer, you could enter:

```
TYPE AMODEM.DOC P:
```

To copy this file to another disk file, enter a file specification:

```
TYPE AMODEM.DOC D2:AMODEM.DOC
```

To create your own text file directly on a disk, type from the Editor to a disk file:

```
TYPE E: TEST.DAT
```

After the above command, the file TEST.DAT will be initialized and the screen will clear with the cursor sitting in the upper left-hand corner. Type whatever you want. When you are finished, enter CONTROL+3. This signifies the End-of-File for the Atari and the TEST.DAT file will be saved to disk. To look at it, enter TYPE TEST.DAT. You can even type directly on your printer: use TYPE E: P:. Unfortunately, you can not use this command to make a copy of a non-text file such as one of your BASIC programs.

Extrinsic Commands

Initializing a Disk. The INIT.COM program is used to initialize new diskettes. This program must be on your diskette when you give the command. Just type the command as "INIT." Do not include the file extension ".COM". If you start out on a single density disk, you will be initializing another single density diskette. Similarly, if you start out on a double density diskette, you will be initializing another double density diskette. You will be presented with the screen shown in figure 3.

DOS DISK INITIALIZER ATARI VERSION 2.0

1. FORMAT DISK ONLY.
2. FORMAT DISK AND WRITE DOS.SYS
3. WRITE DOS.SYS ONLY.
4. EXIT TO DOS XL

ENTER FUNCTION NUMBER: __

Figure 3

If you want to make a disk that is formatted and "bootable", you would use option 2. Enter "2" and the program will then ask you to specify the Drive (1,2,3 or 4). Assume you want to format a disk in drive 1, enter "1". Since formatting completely destroys everything on the disk, you are asked one more time to confirm your selection:

```
FUNCTION 2; DRIVE 1
ARE YOU SURE (Y OR N):
```

Before responding "Y" make sure you have taken out your master diskette and put in the diskette you want to format. When you respond, the requested action will start. When done, the program will ask you to "HIT RETURN FOR NEXT FUNCTION". You can continue initializing disks as long as you want. When you are finished, choose option 4 to exit to DOS XL.

DOS XL Bug. In earlier versions, if you wanted to initialize a disk using the MENU option to initialize, the disk would format and would have DOS.SYS written to it, but it would not "boot." You had to also copy the MENU.COM program over to this newly formatted disk. Then it would boot and the menu program would display. However, the option "Quit to DOS XL" in the menu did not work. Entering a "Q" would merely bring up the menu again. All of these problems could be avoided by using the original master diskette, quitting to DOS XL, and using the INIT command directly to initialize a diskette. The bug was in the MENU program's implementation of INIT. This problem does not exist in version 2.30.

Single Drive Systems. If you have only one drive, and no double density master, you would use the INITDBL command to initialize a double density diskette from a single density master. Once the disk was initialized, you would use the SDCOPY (with a -Q option) to transfer files from your original single density master to the newly initialized double density disk. You will have to swap disks back and forth for each file copied. When you are finished, you will have created a double density master. To make further double density diskettes, just use the INIT command from the double density master.

Duplicating a Diskette. To duplicate an entire diskette, use the DUPDSK command for single density and the DUPDBL for double density. The programs will ask you for source and destination drives and will ask if you want the destination drive formatted. If the source and destination are the same drive, you will be prompted to insert the source and destination diskette as appropriate.

Displaying the Menu. The menu discussed above is actually generated by a separate extrinsic command MENU.COM. Anytime you want to switch to a menu format, just type MENU. Some users may find it more convenient to use the menu (with all its automatic prompts) to duplicate diskettes or to copy files.

Copying Files. The COPY command is used to copy a file to another file on the same disk or to another diskette. The format is:

```
COPY source-file destination-file [-options]
```

There are four options available which can be used singly or in any combination. The options are represented by single letters:

F - Force. This option forces overwrite of existing files. If the destination file already exists, the copy will not be performed unless you include this option.

Q - Query. Asks the system to query you before each file to determine whether you want it copied or not.

S - Single. Indicates a single disk drive copy. System will prompt you to insert source and destination diskettes as appropriate.

W - Wait. Asks the system to wait until you have a chance to insert the proper diskettes before beginning the copy

process. You would use this if you do not have the COPY.COM command on the source diskette. You would put in your master diskette and enter the COPY command with the -W option. When the COPY command has loaded, it will wait for you to take out the master diskette and put in whatever source diskette you like before it starts the copy process.

Some Examples. To copy the file TEST1 to another file called TEST2, you would enter:

```
COPY TEST1 TEST2
```

If an old copy of TEST2 were on your second disk drive and you wanted it replaced, you would enter:

```
COPY TEST1 D2:TEST2 -F
```

If you had a single disk drive and COPY.COM were on disk A and you wanted to copy most, but not all files from disk B to disk C, you would enter:

```
COPY *.* -SWQ
```

COPY would load, the program would ask you to put in the appropriate source disk (Wait), read the directory for the first file and ask if you wanted it copied (Query). If you answer yes, it would transfer the file to memory and then ask you to insert the destination disk (Single). The process would continue for each file on the source disk.

In Closing

I have not covered all the intrinsic or extrinsic commands available in DOS XL. I hope I have given you a good idea of how the system operates and enough information to determine whether you think it is worth having or not.

Before I close though, there is one more feature I'd like to present. With Atari DOS an AUTORUN.SYS file can be created which, upon booting up will cause the system to automatically run a specific BASIC program. For example, you might have a MENU program that lists the BASIC programs on the diskette and allows the user to pick one to run. Your menu program then automatically loads and runs that BASIC program. Unless you have some utility for creating the AUTORUN.SYS file, most users can not easily install their own AUTORUN.SYS file. With DOS XL, the process is very simple. Use the TYPE command to create a file, via the Editor, called STARTUP.EXC. DOS XL automatically checks the disk upon bootup for any STARTUP.EXC file. If one exists, it will execute the commands in that file. You only need one line in your STARTUP.EXC file:

```
DD CAR;RUN "D1:MENU"
```

That's it. Now everytime you boot up with this disk the STARTUP.EXC file will be called, it will pass control to the CARTRIDGE and will RUN the BASIC program called MENU.

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SpartaDOS

by Jack Holtzhauer, President MACUG

SpartaDOS is a product of ICD, Inc. (828 Green Meadow Avenue, Rockford, IL 61107 (815) 229-2999), those folks who gave us "THE ARCHIVER" chip, "ARCHIVER II", and the "USDoubler". The latter is a two-IC chip plug-in kit that converts your Atari 1050 drive to true double density. SpartaDOS lists at \$34.95 (\$24.99 at L&Y Electronics), but is included in the "USDoubler" package for about \$60.00.

If you haven't already read Joe Waters article on DOSXL, or aren't otherwise familiar with that package, stop right here and go back and do your homework. Much of what I'm NOT going to say about SpartaDOS is because of what Joe has already said about DOSXL.

Also, if you're looking for a DOS to use with programs requiring Atari DOS 2.0 compability (such as Synfile+, Syncalc, AtariWriter and many others), skip to the next page. SpartaDOS is not for you! Like TOPDOS, SpartaDOS doesn't use sector linking bytes - all 128 bytes per sector are used for data. It also uses different schemes for allocating disk space and file directory information. The absence of linking bytes and the differences in VTOC and directory handling makes SpartaDOS functionally incompatible with Atari DOS 2.0.

If you haven't been turned off yet and you're interested in a DOS which might, among other things, increase your disk I/O speed by 60%, allow the use of sub-directories or eliminate forever the use of write-protect tabs - then read on.

The first page of the SpartaDOS manual cites ICD, Inc.'s goals in designing their product. They identified the ideal DOS as one that would be compatible with all software and systems; be memory resident; support all densities and switch configurations intelligently; handle hard disk drives if they become available; allow file storage only limited by the capacity of the media; provide for sub-directories; MEMLO below \$2000; support batch processing; support full redirection of I/O; support relative file access; be command driven for entry speed and easy expansion; have provisions for "UltraSpeed" I/O; and, finally, be "disk compatible" with Atari DOS 2.0.

As indicated above, they dismissed the last design goal and, to some extent, their hope for universal software compatibility 'cause they felt there was "just too much waste and overhead in Atari DOS". But, although I have little need for many of the more esoteric DOS functions provided with this package and even less understanding of some of them (I couldn't tell a MEMLO from the Hilo's), it looks like ICD has met the rest of their design specs with more than a little success.

Some quick basics first. Remember Joe Waters mentioned that DOSXL provides two alternative command structures - the familiar menu format similar to Atari DOS 2.0 and a command processor format permitting direct entry of DOS commands. SpartaDOS utilizes a command processor system similar to that employed by DOSXL, but provides NO

alternative means to enter DOS commands by selecting from a menu screen. No more simple A, B, C, or D choices. You really have to LEARN the SpartaDOS commands in order to utilize its functions. A missing space or colon in a command line can cause an abort or send you off somewhere in never-never land.

SpartaDOS has no MEMSAV feature. The manual says it's "not needed with resident DOS". That's true, but don't be misled. The only normal DOS functions you can employ without losing a program resident in memory are DIRectory, ERASE and RENAME. There's some others, peculiar to SpartaDOS, which I'll mention later.

SpartaDOS allows you to format your disk in single, dual (1050 density-and-half) or true double density. You can select 35, 40, 77 or 80 tracks - single or double sided. The Atari standard is 40 tracks, single sided. Other formats are for ATR8000 and double-sided drive owners. Atari DOS 2.0 provides 720 sectors, each capable of holding 125 bytes of data. After subtracting the sectors used for initialization and file management, you have 707 sectors - or 88,375 bytes available for data storage. SpartaDOS provides 713-128 byte useable sectors - 92,160 bytes, an increase of 4.3%.

In formatting, you can also select one of four DOS modes - normal read/write, normal read only, "UltraSpeed" read/write and "UltraSpeed" read only. The "UltraSpeed" versions allow owner's of the 1050 equipped with the "USDoubler" chips to increase I/O speed by as much as sixty percent. For instance, I have a 103 sector file which normally takes 13.5 seconds to load, but only 7.1 seconds using "UltraSpeed" formatting on my converted 1050 drive. Why a read-only DOS option. Well, you save disk space - about three sectors. But more importantly, it's a great scheme to use on game disks, etc. - disks containing files you don't want your youngsters (or yourself) to accidentally overwrite or delete.

You can convert all your Atari DOS 2.0 compatible files to SpartaDOS format and, unlike TOPDOS, you can re-convert SpartaDOS files to Atari DOS 2.0 format. In other words, once you jump in the pool, you can always climb out if you find the water's over your head.

Another SpartaDOS feature is the ability to create sub-directories. I guess all of us have a couple of disks containing dozens of utility programs or sub-routines. Finding the program you're looking for when doing a directory inquiry on one of those disks is always a hassle. You've got to be quick with the CTRL-I keys to keep the listing from scrolling off the screen before you've found what you're looking for. SpartaDOS has solved that problem by allowing you to divide your files under sub-directories - printer utilities under a PRINTER sub-directory, programming routines under a PROG sub-directory, for instance. Now when you do a directory inquiry, you only look at the class of files in which you have an interest. And there is virtually no limit to the

number of sub-directories you can employ. You say you don't have much need for that kind of a utility. You might be right. But don't forget, the 10MB hard disk might only be a few weeks away and ICD feels SpartaDOS is ready and waiting.

Other unusual features? Well, a couple.

...When first formatting or initializing a disk, you are required to give the disk a unique "volume" name which is coded on the disk - ala Commodore. The volume name is displayed at the top of the DOS menu screen.

...SpartaDOS's directory system does not display information in the familiar filename, number-of-sectors-used format. Files are displayed by name, alright, but their length is given in actual bytes used, not sectors, and each is stamped with the time and date last saved to disk, as shown below:

```
SpartaDOS  Wed April 10, 1985  9:17PM
```

```
Volume:    TEST1
```

```
Directory: MAIN
```

```
FAVORITE BAS 12865 3-10-85 10:26a
```

```
DATAFILE LST 15138 3-12-85 9:22a
```

```
457 FREE SECTORS
```

...And, if you like, the day, date and time is constantly displayed on the top line of your monitor's screen, as shown above.

...Transferring data between drives of different densities requires no special action on the part of the user. SpartaDOS automatically switches densities as required.

...NOTE/POINT - Users of programs involving nonsequential NOTE/POINT file accessing may have to alter their programs when using this DOS. Most Atari DOSes use sector and byte number pointers when accessing files in a nonsequential manner. SpartaDOS does not follow this convention. It uses pointers relative to the beginning of each file.

...There is virtually no limit to the number of files you can store on a single disk. You can have as many as 128 under a single sub-directory and can employ as many as 128 sub-directories. Atari DOS 2.0 limits you to no more than 64.

...Finally, what I feel is a glaring omission. There is no provision to LOCK or PROTECT files. It follows, of course, that there are also no provisions to UNLOCK or UNPROTECT them. This might seem to be a small matter, but when combined with SpartaDOS's "no-fail-safe" DELETE/ERASE function, it can be hazardous. Why LOCK or PROTECT a file in the first place. Primarily to prevent unintentional erasures, especially when using commands employing wild-

cards. When attempting to delete or erase a file using Atari DOS 2.0, you're greeted with the familiar prompt to "TYPE Y TO DELETE FAVORITE.BAS". Hit any other key and the deletion is aborted. If you type "Y" and the file is locked, you get a "ERROR 167" (file locked) message. Double protection. Not so with SpartaDOS. If you enter the command "ERASE *.BAS", all files with the extender "BAS" are deleted including FAVORITE.BAS - - one you really wanted to keep.

ICD rationalizes the absence of a LOCK or PROTECT function by providing an "UNERASE" command which will "reactivate" an accidentally deleted file. The catch -- it can't reactivate a deleted file if its space on the disk has been subsequently over-written by another file. In other words, you've got to realize you've goofed when you goof for the "UNERASE" command to be of much help. As the well-known philosopher W.C. Fields once said - "All in all, I'd rather be in Philadelphia!"

As in DOSXL, some of SpartaDOS's functions are "internal" (intrinsic) and some are "external" (extrinsic). As you recall from Joe's article, internal commands are those always available to you once you've booted DOS. External commands are those which require you to load a command file either from the master DOS disk or from your working disk. A brief description of SpartaDOS commands follows:

Internal Commands

The use of any internal command other than BUFS, CAR, DIR, ERASE, PRINT, RENAME and TYPE will result in the loss of any program resident in memory.

APPEND: Used to save a binary block of data at the end of an existing binary file.

BATCH Commands: Used to execute a file having a "BAT" extender. A STARTUP.BAT file can be constructed which will automatically execute upon boot-up similar to an AUTORUN.SYS file (Atari DOS 2.0) or a STARTUP.EXC file (DOSXL).

BUFS: To display or set the number of buffers currently in use. These buffers are 128 byte blocks of memory reserved for DOS use. The default is set at 4 in single density and 6 in double density. Buffer allocation can also be set during formatting.

CAR: Exit from DOS to a language cartridge. Use of this command without a cartridge present will cause a system crash.

COPY: Used to copy files or transfer data between most system devices - drive to drive, drive to editor, etc., etc.

CREDIR: The first directory on a given disk is the "MAIN" directory. The "create directory" command is used if you wish to create a sub-directory for a certain class of programs -- printer utilities, for example.

CWD: Change working directory. When you first boot-up, the "MAIN" directory is the default "working" direc-

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Page 18

tory. This command is used if you wish to use one of your sub-directories as your working directory.

DELDIR: The "delete directory" command is used if you wish to delete a given sub-directory. All files under that directory must first be deleted.

DIR: The "directory" command lists all files under the current working directory.

ERASE: Used to delete a file or files. As mentioned above, there are no "are you sure?" prompts with this command. Execution is automatic. The manual confidently comments "... We assume you know what you are doing with this command so we don't bog you down with unnecessary keystrokes and questions." ICD has a little more faith in my competence than I do, and a lot more than my wife does.

LOAD: Used to load, but not run, a binary file. This is not the same as a LOAD command from BASIC!!!

PRINT: Used to send all output, normally written to the screen editor, to a specified file or device. For example, "PRINT P:" will send all screen output to printer. "PRINT D1:FAVORITE.BAS" will send all output to a file called FAVORITE.BAS on drive #1.

RENAME: Used to rename a given file.

RUN: Used to execute a file starting at a given memory address or to re-run the last .COM file executed. Not the same as RUN in BASIC!!!

SAVE: Used to save binary data from memory to disk. Not the same as SAVE in BASIC!!!

TYPE: This command is used to read an ASCII file from disk and display it on the screen editor.

External Commands

CLS: The "clear screen command" is primarily used to clear the editor screen during the execution of different sections of a batch file -- STARTUP.BAT files providing instructions to program users, etc., for instance.

DIS BAT: The "disable batch" command is used to disable batch processing -- necessary to run some programs under SpartaDOS and frequently used as the last command in a STARTUP.BAT file.

DUPDISK: Used to duplicate an entire SpartaDOS disk using one or two drives.

FORMAT: Used to format a disk, create the directory structure and, if desired, write DOS. The DOS written to the new disk is that appearing on the disk in Drive #1 when responding affirmatively to the "write DOS" prompt.

INIT: The "initiate" command is the master formatting program and allows selection of certain parameters not available to you when using the "FORMAT" command. As previously discussed, formatting selections include number of tracks; single or double side; single, dual or double

density; number of buffers reserved for DOS functions; read/write or read only in either regular or "UltraSpeed" DOS formats, or no DOS. It also allows you to select write with or without verify.

MEMLO: Displays MEMLO -- the contents of memory location \$2E7 and \$2E8, telling the user where the top of SpartaDOS resides in memory.

PAUSE: The "pause" command can be used in a batch file to delay execution of subsequent sections of the file until a user touches a key -- useful, for instance, between screens when displaying instructions re program usage.

PORT: Used to set parameters for RS232 communications. This command can be used to send a two-byte configuration file to the RS232 port -- baud rate, word size, parity, etc.

RS232: Used to load the RS232 handler; boots the RS232 handler in the 850 interface.

AT RS232: Loads the RS232 handler for the ATR8000.

SET: Used to set the time and date for screen display and file stamping.

SPCOPY: The "special copy" command is used to convert files from Atari DOS 2.0 to SpartaDOS format, and vice versa. This utility allows file transfer to or from any density using one or two drives.

TIME: This command is used to toggle on or off the day/date/time line at the top of the editor screen.

UNERASE: This command is used to "reactivate" a deleted file providing it is still intact and has not been over-written in whole or in part.

Conclusions

There's no question SpartaDOS offers a number of interesting and unusual features -- variety of formatting schemes and DOS modules, time and date stamping of files, the ability to define sub-directories, and high-speed I/O are just a few. But it also has significant drawbacks. It can't be used with a number of popular programs requiring Atari DOS 2.0 compatibility and the absence of a LOCK or PROTECT feature still bothers me. More important, particularly for novice computerists, is the lack of a menu command structure. All in all, for general everyday use I still prefer Atari DOS 2.0 over these smart-alecky johnny-come-latelies. I guess like most old foggies, I'm just resistant to change. Well, that's it. My chalk's down to a nub and there's no more room left on my slate.



DOS 2.5 TO THE RESCUE

by Eric Clausen

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This long awaited product, successor to Atari 2.0, will become the new 'official' Atari DOS. It was written by the same group of people (headed by Bill Wilkinson of Optimized Systems Software) who are responsible for Atari BASIC, DOS 2.0, BASIC A+, BASIC XL, DOS XL, ACTION! and other top-ranked Atari products.

DOS 2.5 supports both single density and the enhanced (dual) density mode on the Atari 1050 disk drive. If you format a disk in your 1050 drive with this DOS, you'll find that you now have 1010 sectors (129K) of available disk storage. This represents a 43% increase in capacity over DOS 2.0. DOS 2.5 maintains the use of 128 byte sectors but increases the number of sectors per track from 18 to 26.

Most importantly, DOS 2.5 maintains file compatibility with DOS 2.0. Thus if you have a 1050 drive, you can boot up DOS 2.5, format a disk, directly copy your DOS 2.0 files onto the disk and have considerably more room left over. All this with no hardware modifications to the disk drive.

Otherwise, this new DOS looks and acts exactly like DOS 2.0. The menu will be reassuringly familiar as there has been only one addition: Option [P] on the DOS 2.5 menu will allow 1050 disk drive users to force a single density disk format instead of the default enhanced density.

Those of you with 810 drives need not despair, this DOS is for you too. Although you will not be able to use the enhanced density feature, you can boot DOS 2.5 disks that were formatted and written in single density on 1050 drives. The way that DOS 2.5 handles this is to "hide" files from the 810 drive that cross over sector 720, which is normally the last DOS 2.0 sector. If you completely fill a DOS 2.5 disk (1010 sectors) on a 1050 and then check the disk directory at some point you will see files listed like this:

```
FILE1.BAS 025
<FILE2.BAS> 025
```

This tells you FILE1.BAS is entirely contained within the first 720 disk sectors and can therefore be accessed by an 810 drive. The file(s) with the "< >" characters around them are NOT accessible with an 810 drive because they are physically located where the 810 drive can't read them. So if you have an 810 and ask your friend with a 1050 to copy some of his files, make sure the files you want don't have < > around them!

Other features of DOS 2.5 are:

- 1) Though the directory of an empty formatted disk reads "999+ FREE SECTORS", you really have 1010 sectors.

- 2) Option J (Duplicate Disk) now formats the destination disk before copying.

- 3) DOS 2.5 will allow 64K of memory in the new 128K Atari 130XE computer to be used as a ramdisk.

- 4) A file conversion utility to convert Atari DOS 3.0 files to the DOS 2.5 format.

- 5) A utility to create autoboot basic programs.

- 6) An un-erase capability to retrieve accidentally erased files.

- 7) You can easily turn write verify on or off and change the number of disk buffers, without resorting to POKES.

- 8) The ability to test for bad sectors -- whole disk only.

Options 3-8 are not directly accessed through the menu but are included on the DOS 2.5 disk as binary load files.

One thing that concerns me, as a user, is the lack of a disk utility program for enhanced density disks. In some preliminary checks, I've found that DiskWiz 2 will read all enhanced density sectors out to sector 1023 (the difference between 1023 and 1010 is taken up by the boot and directory sectors where program data is not stored). It won't trace or map sectors that run past sector 720, however.

I hope some company or individual will soon produce a full-featured disk utility compatible with this highly impressive new DOS 2.5.

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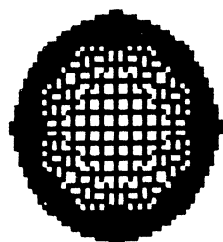
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GAMEVIEWS*by Roland Gabeler*

Finally.....**Ballblazer!** Thank you Epyx for bringing this game to the public after Atari dropped the ball, or as would fit this game, failed to score! As an avid reader of game magazines and Atari related publications, I have been teased and baited about this game for several months. The publicity surrounding Lucasfilm's development of **Ballblazer** and **Rescue on Fractalus** was phenomenal. You'll note I said "publicity", not advertising, since all the coverage was magazine coverage -- not paid advertisements. The publicity was most likely orchestrated by the Atari advertising staff in concert with the public adoration of anything with the name "Lucas". The Lucasfilm games were further delayed by having fallen into the world of pirates and receiving wide national distribution on pirate boards. It was said that both companies blamed each other for this and ultimately, it was questioned as to whether the games were marketable given the scope of the piracy distribution... The review will be a happier experience than the pre-review!

Was the game worth the wait or would it pale from the unanswered anticipation and too much hype? **I love it!** I must admit to a predisposition to enjoying abstract games. This game is a combination of superb abstract graphics and soccer-style play mechanics. It is a first person pong variant in which you are the pilot of a rotofoil craft skimming along a playfield on a cushion of air at incredible speed. Your object is to compete against man (or computer) to obtain a sphere in front of your craft, hold it in your magnetic forcefield, and fire it through the goalposts. Those goalposts are moving at each end of the checkered field, and they shrink in width as more scores are made.

Your rotofoil craft is teardrop shaped and surrounded with a force field similar to that which surrounds a magnet. I'm sure you have experimented with two bar magnets, and noticed how they repel each other at one end. That is exactly how the rotofoils react to each other in this game. The game is viewed on a horizontally split screen. Your view is what you would see if you are inside the rotofoil looking out the windshield. When you have the sphere in your forcefield, it's in the center of your screen. When your opponent has the sphere, not only can you see it in his portion of the monitor, but when he is in your picture, you can see the sphere "riding" in front of his rotofoil. You then attempt to hit him with your force field and hit the firing button at the same time. This action jets the sphere and you both go racing after it.

This interaction between players is conducted at a frantic pace as the game's timer counts down. Whoever has the highest score when time runs out, wins the game. There are no ties, but sudden death if the score was tied when the time ran out.

Wow, this game will wring you out with the required concentration when playing a skilled competitor or the skilled selections of the computer. The game also has a

Tips 'N Traps*Stevenson, Francese and Burke*

We are happy to say that we have gotten some calls from a few people this month who have asked about problems from two adventures: **Dallas Quest**, and **Hitchhiker's Guide to the Galaxy**. We have already solved and reported on **Dallas Quest**, but not **Hitchhiker's**, because no one on our staff has solved it as yet. But rest assured, it will be a special attraction in the near future. Anyway, the question for DQ was: "Where do I get the flashlight?" The answer is, "It is somewhere in Chugalugs trading post." Hope this pulls the curtain of uncertainty for some of you. The next question: "How do I get the Babble Fish?" Well, the answer to that one has not yet been found by our staff, but we'll keep it in mind when we use **Hitchhiker's Guide** as our main attraction for that month.

In any case, enjoy figuring out these hints for the graphics adventure, **Blade of Blackpoole!**

Q: How do I get the bees out of the tree without being stung to death? A: It's easier to catch flies with honey than vinegar. In this case, think of your black and yellow flying friends with a bad bite.

Q: What's the helmet for? A: You need it to journey 20,000 leagues under the black pool.

Q: What do I do with the amulet? A: Give it to a waiting recluse that holds the book to your future at the edge of the forest in a swampy area.

Q: What do I do with the lizzard? A: Be like the resistance on V and wipe out the scaly invader! Instead of using red dust, say the magic word NEDHAM backwards, and kill it.

Q: I'm warned about my hunger after I've gotten the sword and teleported back. What do I do? A: Eat the remaining honey, if you remember where you left it. Otherwise, you did pretty good to get this far. Too bad.

Q: What do I do back at the nasty looking carnivorous plant? A: You have to be busy as a bee before you get passed him.

=====
Gameviews (Continued)

very nice musical score that tends to pace the games action. The instructions provided by Epyx are first class, full color, (remember when Atari and others did full color instructions for game software?) and provide the sci-fi storyline for the game.

I love to play this game, and could go on and on about strategy and play mechanics. But, I'll simply say, if you love highly competitive, mind involving, frantic paced games, run, don't walk, to your nearest computer store and buy this classic game.

Thanks again to Epyx for polishing this game, and seeing past the piracy controversy, to bring this game to the public. It would have been tragic if only pirates could have owned this game and the honest people would have been denied this fabulous effort by Lucasfilms.

ACTION! Action*by Jon Smith*

This month we will discuss one of the most flexible aspects of Action!, the ability to declare your own variable types. We will also review Action's built-in string handling routines.

Custom Data Types.

A custom data type is simply a type other than a CHARACTER, BYTE, INTEGER, or CARDINAL. Data types that are user-created must be composed solely of the four primary data types and arrays, however they may be rearranged. For example, you could declare "NewType" as a new data type. "NewType" could contain a BYTE as the first and second fields, a CARD as the third field, and a CHARACTER array as the fourth.

In order to declare a new type, you must make use of the "TYPE" statement. The statement needed to create the example used above would read:

```
TYPE NewType=[BYTE first,second
              CARD third,
              CHAR ARRAY fourth]
```

To put your new variable type to any effective use, you must declare a variable as that type. This is very simple, in fact it is just like declaring a variable as one of the four primary types. To declare variable "test" as type "newtype," the following statement would be necessary:

NewType test

All of the normal variable declaration options are still possible, for example the following statement would place variable "test" in memory at \$1000:

```
NewType test=$1000
```

Now that your new variable has been declared, how do you access the different fields? You must use the field ID name, assigned when you created the new variable type. For example, to access the first field of our variable "test", the following statement would be used:

```
test.first = 100
```

This would place the value "100" in the first field of "test." As you remember, the first field of "test" was initialized as a BYTE. Custom data types have a variety of uses, especially for data management programs.

String Handling Routines.

When I first began to learn Action, I was confused about the built-in string handling routines. Assuming some of you are also confused, I'll explain the fundamentals of strings in Action.

In Action, strings are officially dubbed "CHARACTER arrays." The first segment of the array (actually segment zero) is the length. A CHARACTER array can be up to 255 characters long.

String manipulations are not as straight-forward in Action as in BASIC. Below are several BASIC string manipulations with their Action counterparts.

BASIC	Action!
DIM XS\$(100)	CHAR ARRAY xs(100)
XS\$="Hello!"	xs="Hello!"
YS\$=XS\$	SCopy(ys,xs)
YS\$=XS\$(3,50)	SCopyS(ys,xs,3,50)
YS\$(3,50)=XS\$	SAssign(ys,xs,3,50)
Y=LEN(XS\$)	y=xs(0)
Y=VAL(XS\$)	y=ValC(xs)
YS\$=STR\$(X)	StrC(x,ys)

NOTE: Action's "Val" and "Str" should be followed by a C, B, or I depending upon whether the number is a CARDINAL, BYTE, or INTEGER. For example, "ValC" for the Value of a CARDINAL number.

Action also has several string functions that BASIC doesn't have. The SCompare FUNCTION is a very useful routine. The calling format is:

```
x=SCompare(x,y)
[ x and y representing strings ]
```

The number returned would be either positive, negative, or zero:

If string1 > string2 then positive.

If string1 = string2 then zero.

If string1 < string2 then negative.

The comparison is alphabetic, making this a very useful routine.

In Action, a single CHARACTER array can contain several strings. In order to do this, the string must be initialized as a "CARD ARRAY" so that each segment of the array can be regarded as a pointer. For example, if a string is initialized as:

```
CARD ARRAY text(4)
PROC main()
  text(0)="Washington ACE"
  text(1)="AURA"
  text(2)="CPM"
  text(3)="NCAUG"
  text(4)="Novatari"
RETURN
```

The statement "PrintE(text(4))" would print "Novatari" since the fourth element of text is a pointer to the string "Novatari".

At first, strings in Action may seem more complicated than in BASIC. However, with the sacrifice of simplicity you gain power and control.

Well, that about wraps up this month's column. If you have any questions, find me at Novatari meetings or call me at (703)437-8652.

ATARI SCUTTLEBITS*by Bob Kelly*

It's been a few months since we looked in detail at some of the important events affecting the electronics industry. So without further ado...

IBM/PCjr.

Well! Well! Who would have guessed? The IBM PCjr. has "bit the dust", or the more erudite might say, cancelled the product. IBM has bravely announced to its existing PCjr. customer base that it will continue to support the jr. with new software and service. The service, I am sure of. New software for a defunct machine? After the first few months, don't expect much - if anything at all.

This news does not, of course, come as a surprise to regular readers of this column. In the October 1984 issue of CURRENT NOTES, I predicted this outcome (as was also the case for the Coleco Adam). It was fairly obvious one-half year ago that IBM had to narrow its product line after the introduction of the PC-AT. The rationale for the jr.'s failure, as stated in my October column, was:

In my opinion, the IBM pricing policy is wrong in that the PCjr. and the PC lead to customer confusion. Many buyers "vote with their feet" by going to another manufacturer. Look for IBM to correct this flaw. They should only have a maximum of three machines below \$4,500. Currently, they have four (PCjr., PC, PC-XT, and PC-AT). One or two machines will be dropped or even combined in order to more clearly target various market segments and income groups.

Why the reminders? Reading the trade magazines and newspapers, one gets the impression of surprise by the sudden end of the PCjr. Further, many place the blame for the failure of the jr. primarily upon the decline in demand for home computers. According to a recent survey by Dataquest Inc., only 13% of the estimated 86 million homes in the U.S. have home computers. Of those who own computers, a significant percentage never use them. As for the PCjr., it's failure had nothing to do with any purported decline in the home computer market. I believe the facts clearly support the market forecasting failure cited in the quote above. Watch for even more product consolidation in the future by IBM to reposition itself in the market.

However, having restated my reasons for the jr.'s failure, there is no doubt that the demand for home computers has fallen. Demand is sluggish for Apple Computers and more or less non-existent for Commodore. The decline in demand, in my opinion, is the result of a fundamental market failure. Simply put, there is a lack of home productivity software to use with all the new sophisticated hardware. Now here's the rub, this

lacklustre software market will more than likely affect sales of Atari's new computers (8 and 16 bit).

Atari

Optimism remains high. As you read this article, the STs are supposed to be on the market. However, as I write this article (mid-April), it is possible to buy a 130XE in Washington, D.C. for 10 to 15 percent below retail. Yet I, as well as others, have passed up this opportunity at this time. Why? Initially, I came up with three reasons:

1. DOS 2.5 was unavailable so I couldn't access the additional 64K (should be available by early May).
2. I didn't know if it would work with my ATR-8000? I called SWP to ask. They didn't know either since they had not tested the 130XE yet.
3. What of the new software? The Infinity Series was to inject new life into the 8-bit software market. I was waiting for this infusion eagerly given my already massive investment in 8-bit software. After several calls to mail order stores, I found that nothing was available.

I sat back for a long moment after these quick gut reactions and wondered. "There must be something wrong. Atari stated it was going to support the 8-bit market (3rd party developers, etc.)." In addition to programming and database management, I use my computer primarily for word processing. The easiest way to find out what was going on was to invest in some phone calls to LJK (Letter Perfect), Batteries Included (Paper Clip), and OSS (Writer's Tool) to see if any of these firms had rewritten or are rewriting their programs to access the additional 64K of RAM or to take advantage of Atari's proposed new 80-column monitor. I did not call Atari concerning the new Atariwriter Plus since we all know that Atari does not answer it's phone. The answers I did receive from the software firms surprised me.

1. None were currently rewriting their word processing programs to enable them to access the additional 64K in the 130XE.
2. Two of the three thought it likely that they would rewrite their programs. One indicated that by the end of summer a revised version might be on the market.
3. One of the three did not even know Atari intended to produce an 80-column monitor!
4. None were prepared to comment on their software being compatible with the 80-column monitor since they had not seen, nor tested, it. (Note, in mid-April I heard from a most reliable source that the 80-column monitor has been put on indefinite hold by Atari.)

I have come to the conclusion from this experience that little in the way of upgraded word processing software for the 130XE from third-party vendors will be available before the Fall.

Does this experience have implications for 520ST? You bet your boots! I have heard comments from various users such as: "Atari will have a flood of software at introduction time" and "It is easy to port-over all the Macintosh software - so don't worry". Yes, software will be available for the ST at its introduction. But, according to my sources, unless you are into accounting, don't get excited. You're going to have to wait and, quite frankly, I don't know how long for quality home productivity programs. If the third-party software developers are not yet prepared to write revised memory management code for the 130XE, can you imagine the time required for them to fully support the ST?

There is only one way to correct the problem. Atari should develop its own software. Rumor has it that the Wizard (Tramiel) has already started this process. Unfortunately, this reminds third-party software houses of how the Wizard dealt with them in the "old" days at Commodore, which could be counterproductive for Atari (a catch-22 situation). In any event, the question remains as to when quality software will be available? Until it is, any market fires will only be caused by software houses burning their inventory of PCjr. disks, not from sales of the Atari ST.

Commodore

You think Atari has problems. Commodore stock was valued at almost \$50 per share in January 1984. As of April 12, 1985, it was only \$10 per share. No one, including myself, foresaw the magnitude of the Commodore collapse.

A number of reasons are cited for Commodore's decline and prospects for any immediate turn-around look dim. The reasons are:

1. The general decline in demand for home computers. Commodore reported a 94% decline in earnings in the quarter ending Dec. 31, 1984.
2. Sales of the 64s have not increase since Christmas and the new Plus 4s are piled up in the warehouses. Inventories valued at \$450 million at the end of 1984 are not expected to decline significantly soon.
3. The Commodore 128 will not be introduced till May/June and will afford little competition to the Atari ST line.
4. The Amiga, Commodore's new innovative product, is not likely to be ready before July and software development will lag. The market is somewhat skeptical that all the pieces will come together for Commodore in time to market a competitive package by Christmas '85.

5. Commodore does not have the Wizard - Atari does. Commodore President, Marshall Smith, has been severely criticized by many market analysts since taking over from Tramiel in early 1984.

Commodore's Amiga reportedly is a 16-bit 256K RAM computer with double-sided 800K disk drives. It will have an overlay system similar to DRI's GEM with excellent graphics capabilities. Rumor has it that some near production models have been recently delivered to third-party software developers.

Commodore has an uphill fight on their hands. The Amiga is their heavy hitter. In my opinion, the quality, uniqueness, and timely introduction of the new software for either the Amiga or ST is going to determine the big winner with the home computer consumer. Who has the best hardware will be irrelevant to the competition ahead. Right now, my bet would be on Atari due to Tramiel and Commodore management's record of digging a bigger hole for itself over the past nine months.

Next month, some rumblings on really new hardware and software products. See you then.

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Going Online

by Ed Seward

Welcome to another installment of Going Online. As most of you know there are quite a few terminal programs available for Atari computers. Of these there are five types that work 'as is' with the 835/1030 modem: AMODEM, CHAMELEON, DISKLINK, HOMETERM and TSCOPE. (All of these also work with modems requiring the 850 interface.) Three of these are on the NOVATARI Telecom Disk #2.

This disk comes with five terminal programs: DISKLINK, TSCOPE and three versions of AMODEM. The disk also comes with a patch to modify the AMODEM programs so that they will be compatible with the XMODEM protocol used on CompuServe. Also on the disk are a number of documentation files. There are the usual 'DOC' files for each terminal program. One of the documentation files is an explanation of the ARNUDIC commands - "ARNUDIC.DOC". Another helpful file for those just getting started is "TELEABCS.DOC". This file contains most of the words that are frequently used in telecommunications.

DISKLINK

Of the five terminal programs on the disk, DISKLINK is the most fun to use. Many people know about the 'MacIntosh-like' use of windows. The windows alone make this program interesting to use.

To go online one can call up a file from disk containing a phone number for your 1030 modem to dial. You can also use an Auto Typer file to automatically log you on to a system. All this without touching the keyboard - one can use a joystick to select and activate a menu item.

One can also upload, download and capture. However, the up and downloading will not work with some systems. Also, DISKLINK is ASCII only (no cursor art and no D/L and U/L of files containing non-ASCII characters).

For a relaxing online session of reading and leaving messages this program is hard to beat. If you think you might want to send or receive a file then I would recommend using one of the other terminal programs on the disk.

TSCOPE

This was the first program to give the 835/1030 modem true working upload and download capability. TSCOPE also supports most of the CompuServe VIDTEX features.

One can dump a text file to a printer but there is no capture to disk ability. Another missing feature is the option to display a disk's directory.

TSCOPE does have a couple nice features - such as word wrap and the ability to alter the width of the display. It also has the ability to autodial and automatically log-on to CompuServe.

When using TSCOPE to download a file you can download any file except those with an 'XMO' extension in the filename. One thing to keep in mind is text files take longer to D/L using TSCOPE than they do using the XMODEM protocol that AMODEM and many other programs use. Of course capturing a text file would be faster still.

AMODEM

On Telecom Disk #2 one will find three versions of AMODEM; AMODEM42.835, RMODEM.BAS and TMODEM.BAS.

AMODEM42.835 offers capture, upload and download with Xmodem protocol. This is the basic 'no-frills' version of AMODEM. It is the only one of the three versions on the disk that is completely error free. The other two AMODEMs are included because of the features they offer. Even with the errors RMODEM and TMODEM are very useful.

RMODEM.BAS is used to demonstrate the use of a new R: handler, R.BIN. R.BIN works with the 835/1030 modem and modems requiring the 850 interface. RMODEM offers the same upload and download as AMODEM42.835 (approximately 19K), but with several added features. The added features are: a clock, the Format disk and New file name commands.

The third version of AMODEM, TMODEM.BAS, has upload and download whose only size limitation is the amount of available space on a disk. TMODEM also has a built in directory for 9 numbers with auto-dial and auto-redial. This program does have two problems. The capture command doesn't work. Also, if one aborts an upload the next upload, during that session, will upload the proper file plus the remaining portion of the aborted upload. (Thanks go to Joe Waters for experimenting to find the last problem.)

Three of the programs on this disk allow the 835/1030 modem to answer the phone (NOT Auto-Answer). Those programs are DISKLINK, RMODEM and TMODEM. Also, I hope to include improvements and fixes to the AMODEMs in this column and to put patched complete programs on ARNUDIC.

Let me close by saying that this disk is a great way to get yourself started and at about half the price that some places charge for just three programs.

=====

The new number for

A R M U D I C

is

(703) 569-8305.

=====

ARMUDIC Is Back Up!**By Ted and David Bell,
SYSOPS**

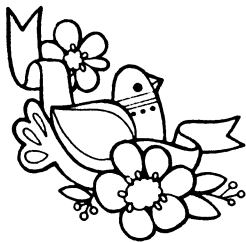
ARMUDIC, the BBS of Novatari and the DC Users Group, is alive and kicking. Note that we have a new number: 569-8305. First of all, let's give thanks to John Brophy our former SYSOP who had to work out many of the bugs in the program. ForewXL is a BASIC program, about 40 pages long and it is a "tiger." Also thanks to Frank Huband and Bruce Blake who finally solved the hardware problems.

We had to re-initialize the entire board and start fresh to really get it going right. You will have to re-apply for password validation to gain the member higher-level access. I did this because there were too many non-members accessing the board. As a guest or after applying for password validation, you will find that you will not be able to do much. Don't worry. I set the default much lower. As soon as your password is validated (within two days) you will have full member access.

The board is becoming very active. Realizing that our membership consists of a full cross-section of people from the young, to a little older, and from less technical to real hackers, we intend to try to have a little of something for everyone. One of our main thrusts will be to obtain fresh up-to-date news. We want the board to be informative. Also we will be continually changing the downloads. By the way, there are some very interesting text files on the board at this time.

Mr. Tramiel of Atari has announced that Atari will attempt to work closer with the user groups. Well, we want our BBS to be ready for any and all downloads or whatever from the new Atari.

The board is the property of all of us members. We are just the SYSOPS. So we are open to any and all suggestions whatsoever. We'll look forward to hearing from you on ARMUDIC!

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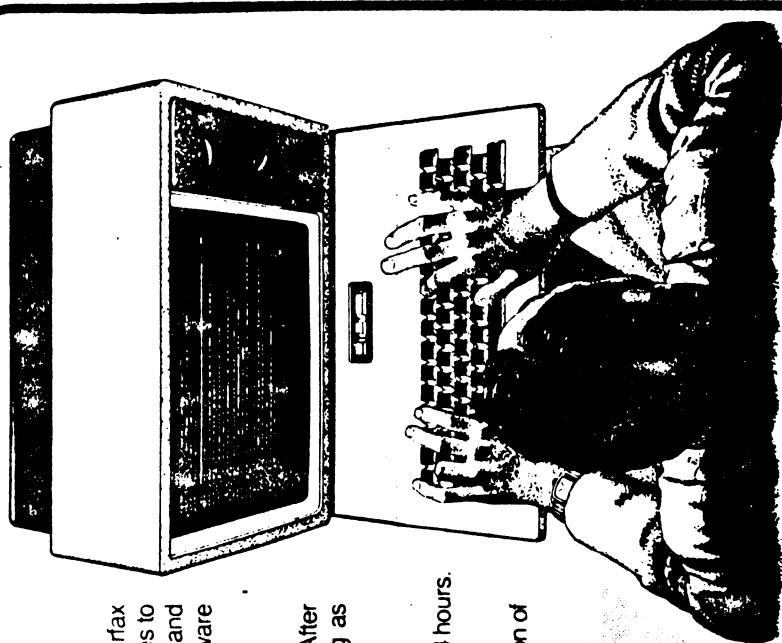
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NEW PRODUCTS

by Jack Holtzhauer

According to John and Suzie Linton of L&Y Electronics (see advertisement elsewhere in this issue), there's not much new on the shelves this month, although the lead-off item is certainly of interest to all Atari loyalists. As usual, descriptions and claims are those provided by the manufacturer. Prices are those available at L&Y and do not include an additional 5% discount on software for users' group members (except on special sale items), and may not apply elsewhere.

ATARI 130XE PERSONAL COMPUTER, Atari Corp. Sunnyvale, CA 94086.

Atari's new 130XE computer arrived on local dealer's shelves on April 9th. Said to be fully compatible with its predecessor, the 800XL, it sports 128K RAM, 24K ROM, built-in BASIC, an "enhanced cartridge interface", a brand new chip (the FREDDY) to handle memory system control, and promises RAM disk storage with Atari DOS 2.5. It comes with an 132-page manual which includes a tutorial in the fundamentals of BASIC. Priced at \$169.00.

New computerists are cautioned they will not be able to use the expanded 64K RAM offered by this unit until new memory "bank-switching" software comes on the market. Like all former Atari computers, the 130XE uses the 6502 family of microprocessor chips which can access no more than 64K RAM at a given time. Current versions of such popular applications programs as AtariWriter, SynCalc and SynFile+ cannot access the 130XE's extra memory. A "super" version of AtariWriter is on the way and Broderbund (new owners of Synapse) reports they will start work shortly on new adaptations of their SynSeries. And, don't forget, Sam Trameil promises an Atari "LOTUS 1-2-3" (INFINITY) by mid-year.

UPRINT PRINTER BUFFER, MODEL A16, Digital Devices Corp., 430 Tenth Street, Suite N205, Atlanta, GA 30318 (404) 872-4430

This new printer driver/buffer takes the place of the 850 Interface and will store as much as 16K (expandable to 64K). It's just the thing for those who want to use their computer for other things while their printer is running copy. Works with AtariWriter and will print as many as 255 copies. Lists at \$129.99; priced at \$99.00.

TROLLS AND TRIBULATIONS, Creative Software, P.O. Box 61688, Sunnyvale, CA 94086

They're lurking under your city - an entire underworld of troll-eating cretins and other nasty demons. Hidden away in this forbidden maze of dark caverns, rising waters and secret dungeons are glorious

treasures, thousands of years old. Disguised as a troll, you enter the underworld to save these treasures from the monsters and . . . Seven levels of play; over 200 dark and eerie chambers to explore. Joystick controlled. Lists at \$39.99; priced at \$25.99.

BALLBLAZER and RESCUE ON FRACTALUS, Lucasfilms Games, Epyx Computer Software

Pre-release versions of these games have been passing around the pirate network for the past year or so, but Epyx claims their final products will knock your socks off.

I had a chance to run "RESCUE" at L&Y for a couple of minutes before somebody took the disk out of the drive and bought it. It was the last one L&Y had in stock and I never did get to read the promo blurb on the back of the box. But, I'll tell ya. The opening screen is awesome - every bit as much as the "ROBOT" and "SPACESHIP" graphic demos Atari ran at the Vegas CES. A giant rotating space station - a couple of hundred shades of silver-gray, with star-fighters orbiting every once in awhile. Fantastic! The scenario. I'm not really sure. I think the deal is that you're flying your star-fighter to the planet of "FRACTALUS" where you have to locate, land, and rescue downed compatriots while the bad-guys are shooting at you. You get to shoot back. I think I like it! Joystick and keyboard controlled.

BALLBLAZER is a two-player game. You and your opponent are strapped into hovercrafts skimming the surface of the playfield at up to 50 meters per second. Your objective - to fire your plasmorb thru your opponent's goal more often than he can do likewise. Want to try a 3 point over-the-horizon shot or settle for a regular 2-point attempt? Realistic 3-D depth perception. Three player modes - regulation game, practice mode and spectator mode.

Both games list at \$39.99; priced at \$32.99. **WARNING:** Neither of the current versions will work on PERCOM drives!

FRENCH LANGUAGE, ITALIAN LANGUAGE, SPANISH LANGUAGE, Artworx, 150 North Main Street, Fairport, NY 14450

According to the maker of these foreign language programs, in ten hours you can learn a vocabulary of 400 words and the language's basic grammar. The firm's LINKWORD language system is said to make learning faster, easier and more enjoyable. For best results, an audio tape is included so that you can hear the correct pronunciation of new words while learning. Priced at \$29.90 each.

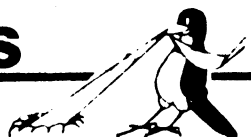
PAGE DESIGNER, Xlent Software, P.O. Box 5228, Springfield, VA 22150, (703) 644-8881

This printer utility, written by Dennis Young and Len Dorfman and distributed by the same the firm which gave us MEGAFONT II, etc., is a pretty nifty package. What does it do? Pretty much what the name implies -- "it's a utility that let's you plan an 8-1/2"x11" page on your screen and then print it. Page Designer lets you combine pictures, drawing and text on one page. The 40 column text mode lets you use different character styles. The 80 column mode is good for getting a lot of information on the page. All in all, Page Designer lets your imagination run free . . ."

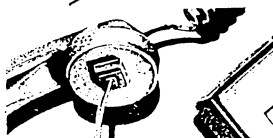
It comes complete with sixteen different characters sets and 52 new graphics characters (not counting the standard Atari set). It also has a graphics mode allowing you to draw your own designs and includes a program permitting you to convert Koalpad or Atari Artist files for use with Page Designer. One feature not offered by "THE PRINT SHOP" is the ability to save your designs once created. Disks containing additional print fonts and graphics are available from Xlent Software @ \$10.00. Although the instruction manual is not all that it could be, the package is nicely priced at \$29.99

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BOUNTY BOB STRIKES BACK

Reviewed by Jon Smith

Bounty Bob Strikes Back, written by Bill Hogue for Big Five Software, is a relatively new game boasting twenty-five screens of fast paced excitement. It's the sequel to Miner 2049er, and it's hot! Miner 2049er, of course, was a top selling run-and-jump game released back in 1982.

Miner 2049er consisted of ten levels, with several "devices" such as the dreaded "cannon", etc. The object was to fill in the entire screen while avoiding the radioactive monsters. To kill the little green monsters, you had to pick up a "treasure." After picking up the treasure, you had a few seconds to get the monster. Sort of a hybrid of Donkey Kong and Pac Man. If you aren't fortunate enough to have Miner 2049er, you can pick up a copy of the cartridge at most mail order outfits for ten bucks or less.

In Bounty Bob Strikes Back, the rules of play are the same, only there are 25 new screens to keep you awake at night. If you enjoyed all those nifty devices from Miner, then you'll love the new ones in Bounty Bob. The screens include everything from moving platforms to transporters to suction tubes, and yes, another cannon.

Bounty Bob has several advantages over its predecessor. You have more jumping control, but more importantly, the screen is not cleared after each death, as it was in Miner. Because of this, Miner took a long time to complete. This isn't saying that Bounty Bob doesn't take as long as or longer to finish -- just that it's not as frustrating.

One addition virtually required by the 15 new levels are the warps. Warps are keyboard commands that can be typed in to skip to a specific level. The program will tell you a warp when you reach certain levels. For example, upon reaching level 6, the program will tell you the warp from level 1 to 5. In Miner 2049er there was an interesting way to cheat: Type in the phone number of Big Five Software, and press SHIFT plus the number of the level you wished to go to. Just try that in Bounty Bob!

There is a very complete options menu included as well, with selections for 2-4 lives, and many other interesting variations. The title and high score screens are also impressive.

Bounty Bob is actually a 40k cartridge using bank selectable ROMs, a first for the Atari.

Overall, Bounty Bob is an excellent buy that will keep you busy for a few weeks at least (in my case, a few months). In my opinion, this is one of the few games worth the forty bucks you'll pay (\$50 retail).

=====

SECRET SUNNYVALE CORRESPONDENT

=====

CNR: We're all awaiting news on the new products. Where do we stand and how are things going at ATARI?

SSC: Things are still on schedule and we should be shipping the ST series next week, but in limited quantities. Remember, we don't have a full staff yet, and everyone's working as hard as they can. We'll be delivering quality products, just bear with us.

CNR: Have you decided whether BASIC or LOGO will be the language included with the ST?

SSC: No, the final decision has not been made. However, whichever is the built-in language, the other will be available separately.

CNR: We've heard rumors about the 80-column monitor being dropped. Have plans for this been shelved?

SSC: No, not at all! We're currently concentrating on getting the XE and ST products ready for shipping. Naturally, some of the special equipment will be shipped shortly afterwards. In fact, the new modem will be out by June.

CNR: What about the 32-bit machine. Have you dropped that?

SSC: Of course not! Like I said, the new 8 and 16-bit machines are first. ALL of what I've been telling you WILL come to pass, just give us some time to deliver a quality product at a good price.

CNR: We noticed ATARI's absence from the list of exhibitors at the JUNE CES. Does this mean you're going broke?

SSC: After what I've just told you? How could you ASK such a question? For one thing, the CES is where a manufacturer can show off new products; we've already done that. Second, a trade show like the CES is where we can solicit new dealers and distributors. We did that, too, but it's more efficient to deal with them on a one-to-one basis than on the showroom floor. Keep your shirt on!

CNR: We heard there's a way to get in touch with Atari directly and find out the latest. How do we proceed?

SSC: We have a couple of ways. First, you can always reach us on CompuServe with the ID of 70007,1135. Second, we are in the process of setting up our own Atari bulletin board - the number is 408 745-5308.

You may also contact us if you have an article you'd like to submit by sending a letter to PO Box 3427, Sunnyvale, CA 94088 or by calling 408 745-4204. This number is ONLY for submissions!

You can also use the ATARI SIG (Special Interest Group) on CompuServe and "talk" directly with ANTIC magazine. Be sure to check the latest issue of ATARI EXPLORER (this magazine replaces the ATARI Connection) dated April/May 1985. It has quite a few answers to questions that have come up. THERE! THAT ought to keep you!

CNR: Well! If we can't find out what we want from THAT, I guess there's just no other place! Thanks for everything SSC and we'll hear from you next month!

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INDUS Programming Contest

J.C. Simmons, Director of Marketing, INDUS, Inc.

Pre-Release RAM-Charger

Expansion for your Indus GT drive is now available! Until today the high performance capabilities designed into the Indus GT have been relatively untapped. With the new Indus Systems GT RAM-Charger card you can unleash the power of a truly intelligent disk drive.

Every Indus Systems GT drive for the Atari computer is constructed with a powerful Z-80 processor which operates at more than twice the speed of the 6502 chip used by Atari and other companies.

The RAM-Charger card contains 64K of high performance RAM memory which uses the internal expansion connector inside every Indus GT. This memory card is tailored specifically to the Indus GT drive, and can be directly accessed by the internal Z-80 processor.

One of the most exciting applications of the RAM-Charger card is its RAM disk capability. The memory on the card can be used to buffer data between the computer and the GT drive allowing lightning fast access.

A major milestone for the Atari will be the capability to run programs employing the CP/M operating environment. Using the Z-80 microprocessor from the Indus GT drive in conjunction with the RAM-Charger card and a special BIOS program, soon to be released, you will be able to tap the vast universe of professional data processing programs such as: Wordstar, Supercalc, Dbase II, etc...

Other applications include the capability of creating special diskette formats for either interchanging with non-Atari computers, or simply to create new software protection schemes. The RAM-Charger card gives you complete control of your disk format.

The RAM-Charger package will be formally announced third quarter '85 complete with utility software, documentation, and the Indus Systems full one year parts and labor warranty. The projected retail list price for the RAM-Charger will be \$149.95.

Indus Systems GT Driving Contest

1st Place	Grand Prize	\$1,000.00 Cash
2nd Place	Two (2)	\$ 500.00 Cash
3rd Place	Ten (10)	Indus GT Disk Drives

Use your machine language programming skills to write a winning utility program for the new RAM-Charger card and Indus Systems will present you with an Indus GT disk drive or a grand prize of up to One Thousand Dollars Cash!

Contest Package Includes: The long awaited RAM-CHARGER module for the Indus Systems GT disk drive for

Atari computers containing a high performance 64K RAM board, downloading program, documentation of the GT software environment, and some sample programs such as: a speed check, a display manipulator for the GT drive display, and a special program allowing alternate sector interleaving on the GT disk drive. In addition the package contains a complete Z-80 programming guide as well as Western Digital technical notes on the WD2797. Programmers who wish to enter the "GT Driving Contest" may purchase the software developers contest package at a special price of \$50.00!

Rules: All submissions must be received by Indus Systems no later than May 31st, 1985. All submitted materials become the sole property of Indus Systems. Submitted materials cannot be returned. Versions of winning programs may be modified, copywrited, published, and nationally distributed by Indus Systems. Full credit of authorship will be given to the original author.

Contest: Judging will be by Indus Systems and be completed by June 31st, 1985. Winners will be announced July 1st, 1985 and prizes will be awarded by July 31st.

To Enter: Contest requires the use of an Atari 800XL, or compatible computer, and an Indus GT disk drive equipped with the new Ram-Charger performance module. Using the guides supplied with the RAM-Charger package simply write a program that makes the best use of the RAM-Charger features. Programs will be judged on originality, usefulness, documentation, sustainability by Indus, ease of use, speed of execution, and length.

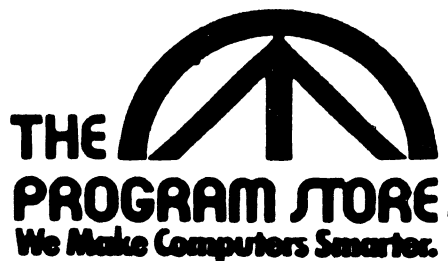
Entries must include the complete executable code, fully commented source code, and written documentation explaining what the program does, what the various modules of the program do, how the program is used, and how the exact executable code submitted by the contestant can be recreated from the submitted source code.

Entries must be submitted on 5.25' diskettes. These disks must be in a DOS XL compatible format single density (Indus density "A"), except for the source code. Source code disk may be submitted on an IBM PC, (MS/DOS or PC/DOS 2.1 or less: no AT formats please). Each submitted diskette must be accompanied with a copy (a backup disk copy).

Entries should be carefully packaged in a sturdy diskette mailer and may be sent through the US Postal Service or through the United Parcel Service (UPS). Be sure to put your name, address and phone number on the mailer, diskettes, documentation and all other submitted materials. Send entries to:

Indus Systems RAM-Charger Contest
9304 Deering Avenue
Chatsworth, Ca. 91311.

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In Defense of ACTION!

by Mike Gancarz

[The following article was downloaded from the ARPA net forwarded to us by Marshall Abrams.]

A guy and I once had an argument about which was faster, an Atari 800 or an IBM PC. We'd chosen a simple benchmark program for comparison, something like "roll a pair of six-sided dice 50,000 times, then print a total count of the number of 7's you got". Comparing the 808x to a 6502 is truly an unfair comparison, but what the heck. When you're in love with a machine, you'll make some pretty arrogant claims. This is how it went:

GUY: "We'll do it in BASIC, okay? You use the BASIC on your Atari and I'll use BASIC on my PC."

ME: "That's not fair. Atari BASIC is the pits. But I am curious..."

(next day)

GUY: "Well, what did you come up with?"

ME: "The Atari did it in 1 minute, 35 seconds."

GUY: (Laughs.) "The PC did it in 42 seconds."

ME: (Ponders a moment.) "Say, isn't PC BASIC a compiled BASIC? The Atari BASIC is interpreted. We're comparing apples and oranges here."

GUY: "Yeah. That's true. Okay. Use a compiled language on your Atari."

(next day)

ME: "Aha! 14 seconds!"

GUY: (Surprised.) "Er, what did you use for a compiler, or should I say, assembler?"

ME: "I used ACTION!, the new language that looks like a cross between C and Pascal but lets you get to the Atari O.S. functions the way BASIC does."

GUY: (Thinks a minute.) "Hmmm...I've got the Lattice C compiler for my PC."

(next day)

GUY: (A little edgy.) "The best I could do in C was 16 seconds. Are you sure you wrote the code right?"

ME: "Sure. Take a look at it."

GUY: (Scans listing.) "Wow. It sure looks like C code. But wait a minute. What's this Rand() function here?"

ME: "Oops. I almost forgot. The Atari has a hardware random number generator."

GUY: "What would you expect from a game machine? The PC is a business computer. You want random numbers, you have to do them in software." (Scribbles on a piece

of paper.) "Here. Replace the Rand() call with this code."

(next day)

GUY: (Acting smug.) "How did it do?"

ME: "Ah. Not so good. Only 16.7 seconds with the software-generated random numbers. But what can you expect? The Atari clock rate is only around 2 Meg, while the PC's clock rate must be at least 5 MHz."

GUY: (Grinning from ear to ear.)

ME: "By the way, how long did it take you to compile the benchmark on your machine?"

GUY: (Still grinning.) "About a minute and a half."

ME: "If I compiled mine from disk, it only took 25 seconds..."

GUY: (Grin fading.)

ME: "...but I didn't compile it from disk because it's too slow. So I compiled the code directly from the editor buffer. That took about 3/4 second..."

GUY: (Beginning to look upset.)

ME: "...of course, ACTION! lets you turn off the video DMA during compilation, so you gain another 33% or so."

GUY: (Looks angry. Threatening.)

ME: "...I almost forgot--I could have turned off video DMA at run time, too. Gee, that means that the Atari would have won in every category!"

GUY: (Grabs ME by the throat. Well, almost.)

ME: "Uh, how about a nice, relaxing game of Star Raiders?"

That story was based on true events. Obviously, the IBM PC will blow the keycaps off the Atari in many cases, but I've got to say this: The ACTION! development environment is the fastest, most efficient I've ever used. The edit-compile-test cycle with this compiler/editor is less than 10 seconds.

The editor "page flips" the entire screen as fast as you can hit a keystroke and, if that isn't fast enough, a stubby routine I wrote in ACTION! causes the software auto-repeat key function to run at lightning speeds. The editor contains a split window feature, plus a cut-and-paste facility that is a marvel of cognitive engineering. So what if it has a few bugs? It sure beats 6502 assembly language!

After fumbling along all day on a big, powerful VAX 780 and a 9600 baud terminal, it is a pleasure to sit down at the end of the day to do some hacking on a hobby computer with a "toy compiler".

AURA

Atari Users Regional Association

President's Notes

By Marshall Abrams

In May we are going to begin a series on data communications. Each meeting's presentation will be composed of two parts. The first will be a lecture on the technology of data communications -- the how. The second will be a discussion of uses of data communications. The lectures will be presented by yours truly, using an overhead projector. In May, Neal Jacob will talk about Smartterm for MMP and several Bulletin Board Systems (BBS) he uses. This series will continue for several months, fitting around other meeting topics.

In June we will be visited by Mike Barnes of XLENT Software. He will talk about the "Joys of being a 3rd party software vendor" and will demonstrate and/or discuss two of his products: Page Designer and MegaFont2. Program suggestions and volunteers are always welcome.

AURA Library Notes

The AURA Disc Library now contains 40 numbered volumes in addition to a number of special discs. Disc #40 was released at the April meeting. Discs 37, 38, 39, and 40 will be available at the May meeting. Each disc contains documentation describing the disc contents. The programs include simple BASIC math tutorials, program development aids, graphics utilities, ATARIWRITER printer drivers, and sophisticated terminal emulators. Handout sheets describing the contents of each disc are available at AURA meetings. At \$3 per disk you cannot afford to miss this great software.

Chief Librarian Bill Schadt is working on a documentation project that will provide a cross-referenced index and critical reviews of the more than 600 titles now in the library. New submissions are encouraged. Each submission should be accompanied by a brief text file that tells how to load and run the program.

Programs from outside sources should give credit to the source. References to more complete documentation should be provided where appropriate. We encourage the submission of programs in source code form so as to increase the educational value of the library. Help is available from the Library Committee if you need it in preparing your submissions. The quality of material being submitted is very high. Thank you and keep up the good work.

AURA members wishing to copy disks prior to #36 can do so by checking out the archival copies from the Applied Computer Associates store. These disks are available for a one week loan period. You will be asked to leave your membership card with ACA while the disks are checked out.

WACUG

Woodbridge Atari Computer Users' Group

President Notes

By Jack Holtzhauer

May Meeting. WACUG's May meeting will be held at 7:00 pm on the evening of Wednesday the 15th in the Community Room of the Potomac Library located on Opitz Blvd. in Woodbridge, Virginia. We'll be running demonstrations of the new Atari computers and, hopefully, newly released productivity software.

The new ATARI 130XE. I picked up my new 130XE on April 9th, just a couple of days before this was written, and thought I'd take this opportunity to share my first impressions with you.

First of all, the mere fact that I'm using the XE to prepare this column will come as a major surprise to many mavens of the computer industry. Who'd have thunk Trameil could'a done it? Most "informed sources" predicted Atari would go the way of TI and Coleco long before Trameil's new hardware would actually hit the market. Maybe this guy Jack and his three sons are for real afterall.

But, now that it's here - what's it like? Well, it doesn't have the sleek look of the XL line. It's familiar innards have been packaged in a plain gray plastic box. No two-tone. No chrome. No flash. Just a plain gray plastic wrapper.

As you've probably noticed from the pre-release photos, they've moved the function keys to a position above the keyboard. No big thing? Just wait until you try those simultaneous two-finger right-hand keystrokes required by some word-processing programs. You know, those combinations you could reach by stretching your pinkie way out to the right. Those OPTION/UP ARROW combos now require almost as much planning as the Normandy invasion. That is if you can identify the OPTION key in the first place. It's easier to see a ghost in a heavy fog than to read the white lettering on the function keys against the light gray key color.

And where the devil is the cartridge slot? Ah! There it is! On the back of the box between the monitor and I/O ports. Good grief, I have enough trouble sticking a cartridge into a slot I can see, much less trying to hit an invisible bulls-eye.

The keyboard, itself. I think it's OK and the graphic symbols now appear on the front of each key, ala GRAPHFIX labels. But as I've been typing articles for this issue I've noticed that I've been leaving out more letters and spaces than I normally do. Maybe I'm just not used to it yet - I dunno. They've shortened the space between the spacebar and the front edge of the box by about an inch. There's no room for you to rest the heel of your hand. Maybe Atari has been listening to ole Miss

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Murphy who taught Typing 101. She always told us we had to keep our hands "poised above the keyboard" and never let them rest on the front of the machine. You don't have much choice now.

Yeh, but how 'bout all that extra memory? It's great. Of course there's no way for the average computerist to use it yet. It's like that extra 16K in the 800XL. It's there, alright, but until software that can access it becomes available, it's just sitting on the bench waiting to be put into the game. The manual does have a couple of pages on "bank switching" to use this extra memory. The first thing the manual says is that the bank switch data is contained in location 54017. That if you PEEK that location you should get a 193. I PEEKed mine. It said 253. I didn't read the rest of instructions.

But wait a minute. Maybe some things have been changed. Maybe the XE doesn't look quite as nice as the XL and you have to fumble a little bit to find the cartridge slot. This little marvel of computing technology merely offers 128K RAM/24K ROM, 256 colors, 320x192 resolution, four sound voices, 11 graphics and 5 text modes, built-in BASIC and the promise of RAM disk storage with DOS 2.5. What's this little magic gray box go for? John Linton of L&Y Electronics traded me one for a lousy hundred and sixty-nine bucks.

CPM**Capital Pro Micro-Users Group****President's Message***by Bob Kelly*

April Meeting. The next meeting is scheduled for May 28, 1985, at 6:30 p.m. (the fourth Tuesday of the month). At the April meeting, the new Atari 130XE was shown. In addition, Bob Danson demonstrated the Atari 1020 plotter. There was some discussion on moving to a larger room since the club has grown in size over the past year to a membership of almost 50 individuals.

Bulletin Board System. Craig Smith, the SYSOP, reviewed the procedures for operation of the new Bulletin Board System at the April meeting. Every member should have received special notification in the mail regarding the Board, its operating hours, and passwords. Remember that we are still in the Beta testing stage and a new more permanent telephone number will be distributed soon.

Please note, the latest library disk (Telecom #2) is the MEX terminal program for operation on the ATR-8000. This is a SS/DD disk with 188K and full documentation. Programs on this disk have been downloaded from all over the country and the demand for this library disk has been exceedingly high. This program without documentation, can be found on our BBS as well as an adjusted SMODEM (1200 Baud default + expert mode) that came with the ATR-8000 and the latest XMODEM 7.

Library Disks. The price of library disks have been reduced. Instead of \$3.50, the new price is \$3.00/disk due to the fact that we are not in the money-making business. Simply put, the treasury is in good shape. Prices for non-members remain the same at \$5.00/disk.

Finally, we have received numerous calls concerning SWP's recent move to expanded quarters. Their new address and telephone number is:

1000 W.Fuller
 Fort Worth, Texas 76115
 Phone: (817)-924-7759.

(WACUG Continued)

And did I say manual a couple of minutes ago? That's right! An honest-to-goodness 130-page manual. Everything from system hook-up to simple instructions in the BASIC language. Even some sample programs. A great improvement over the little pamphlet they threw in with the XL.

If I were you, I'd be the first on my block to grab one.

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NOVATARI

Northern Virginia Atari Users Group

President's Notes

by Joe Waters

April Meeting. The highlight of the meeting was a demonstration of the new Atari 130XE. Other demonstrations included Ball Blazer and Rescue on Fractalus and Bank Street Music Writer. Door prizes included: Jumpman (one version on disk and another version on cassette), a new library disk, and a copy of Atari Explorer. During the main program, I discussed Atari DOS 2.0 and OSS DOS XL while Jim Stevenson showed some of the features of SpartaDOS.

Library Notes. We introduced our first language disk this month: SXPAXCxE fig-FORTH 1.1 -- a full implementation of the de-facto standard FORTH. This is an expanded fig-FORTH package that includes: extended double-precision words, the de-facto standard FORTH Editor (as well as an alternative editor that corresponds with the editing commands used in Brodie's Starting FORTH), a complete Assembler for the 6502, debugger aids, a powerful color graphics vocabulary, and a floating point vocabulary. Complete documentation is included in text files on the back of this disk. Note: if you don't know any FORTH at all, you will still need to get a FORTH text book to make effective use of the language. The documentation lists several possibilities.

New Meeting Place Announced. As many of you know, we have outgrown the Greenbriar Community Center and have been actively looking for another meeting place that would be larger and, hopefully, more centrally located. After months of search we have found our new home: the large auditorium at the WASHINGTON GAS LIGHT COMPANY, 6801 Industrial Road, Springfield, Virginia. WASHINGTON GAS LIGHT is located just inside the beltway between route 95, Edsall Road, and Backlick Road. Industrial Road is off Backlick (coming from the North: less than a mile from Braddock Road; from the South: about 1.5 miles from Franconia Road) and WASHINGTON GAS LIGHT is the second building on the right. It is a very large building with virtually unlimited parking available. The large auditorium, located directly through the front doors, is a shallow semi-circular arrangement that should give all members a good view of the proceedings. There is space in the lobby for disk sales and general chatting so that we should, finally, be able to separate socializing from the demonstration/tutorial/program aspects of the meeting.

Although this location is somewhat further for some of our members, most particularly your president who lives in Sterling, nonetheless, it is close to the beltway and much more convenient for the vast majority of members. Many, many thanks to WASHINGTON GAS LIGHT (WGL) for providing such an excellent meeting place for the community to take advantage of. Many thanks also to Georgia Weatherhead for doing her canvas of the various meeting places available and for finding WASHINGTON GAS LIGHT.

May Meeting. Pay careful attention now: the MAY MEETING will not be at Greenbriar (see above) but will be at the new location: WGL. In addition, the second Sunday in May is Mother's Day. Our meeting will not be on Mother's Day. Our MAY MEETING is on the THIRD SUNDAY, MAY 19th. Future meetings will revert back to our normal second Sunday schedule. Our subject is TELECOMMUNICATIONS. We also hope to have more demos of the new 130XE and, if at all possible, the new 520ST.

ARMUDIC. As many of you are aware, ARMUDIC has been down for an extended time. I am hoping we have, finally, worked out all the problems. The new ARMUDIC phone number is 569-8305. You will have to reregister as a member-user. Call in. When prompted for a PASSWORD, press RETURN. You will be asked to supply your name, age, phone number, and a four-letter password (you make it up but it must be one that no one else has yet chosen). Note: different people in your household can all be on under their own names and passwords. To exit the system, enter "G" for Goodbye. You will be asked whether you want your password saved for future systems. Respond YES! The SYSOP will validate your membership within two days. Our new SYSOPs are Ted and David Bell (455-5312) who will be more than happy to help you out if you have any problems. Ted, a long-time Atari fan, is determined to make ARMUDIC one of the best boards around. I'm confident that he will, particularly with everybody pitching in. Welcome aboard, Ted and Dave.

Atari Explorer. This is the new bi-monthly magazine published by Atari. Subscriptions are available via Novatari for \$12/year -- a savings of \$3 off the regular subscription price. Contact Dave Meyer (455-7145) for further info. We have already sent in one group subscription and will send in another after the May 19 meeting.

Anniversary. Last May, I was elected in an interim election as president of Novatari. Combining this job with the editing of CURRENT NOTES, I have had a very busy year. We have accomplished a lot in this past year and I think the club is moving along steadily on the right track. However, very little would have been achieved if not for the splendid help I have received throughout the period. I, as well as all our members, owe the officers and the various committee chairmen and chairwomen a huge vote of thanks. Each has put in many many hours working to make Novatari a better club for all of us.

I particularly want to thank Marty Vallery for the job she has done in launching our seminar program. Unfortunately for us, Marty will be leaving the area soon and we will be much the poorer for that. We wish you the best of luck Marty and will look forward to reports on how Atari is doing in Georgia! I would also like to welcome onboard Donna Yarbrough who has agreed to take Marty's place as seminar chairwomen. We have managed to locate a regular facility to hold our seminars in (thanks once more to Georgia Weatherhead). Now that location worries have diminished, Donna is faced with the task of trying to set and schedule a program for this summer and for the fall. Anyone interested in helping her out? Give her a call (255-3967).

NOVATARI DISK LIBRARY

Order disks from the NOVATARI librarian. Price for WAACE members (i.e. anyone who subscribes to CURRENT NOTES) is \$3.00/disk plus \$1.00 for postage and handling for every 3 disks. If you are not a member of WAACE, cost is a flat \$5/disk (includes postage and handling.) Send checks, payable to NOVATARI, to M. Evan Brooks, 4008 Patricia Street, Annandale, VA 22003.

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TELECOM DISKS:

- 1 - 850 INTERFACE (Amodem Plus V4.4, Amodem Plus XL V2.5, AUTODIAL, TSCOPE, plus several documentation files)
- 2 - 835/1030 MODEMS (AMODEM - 3 versions), TSCOPE, DISKLINK, handlers and docs for all programs).

UTILITY DISKS:

- 1 - MISC UTILITIES (Casette to Disk, Sector Examiner, Make AUTORUN SYS, Timeclock 6, and more....)
- 2 - PRINTER UTILITIES (Banner generator, Cross-Reference Lister, Disk Directory Printer, ATASCII Lister Program, Mailing List Program, Screen Dump for GR.7.&8 8, and more)
- 3 - ATARI DOS 2.5 (Includes DOS plus RAMDISK, DISKFIX, COPY32, and more...) [Available at May meeting]

LANGUAGE DISKS:

- 1 - fig-FORTH Version 1.1. (Includes FORTH language, ASSEMBLER, DEBUGGER, EDITOR, and complete doc files)
- 2 - ACTION! SOURCE PROGRAMS [Coming MAY 19]

NOVATARI PROGRAM EXCHANGE

VIZPICS (\$4.00) by J. Stevenson Jr. Collection of pictures (side 1: Dark Crystal, side 2: Star Trek) generated by Tim Kilby's Visualizer program. Can be shown individually or in automatic mode like a slide show.

WORD BUILDER (\$8.00), by J. Waters. Vocabulary-building game including 9 100-word dictionaries (grades 2-8) plus a music trivia quiz and a "short word" quiz. Includes data base program for updating old (or new) dictionaries.

UNDELETER (\$4.00) by J. Smith. A menu-driven utility that allows you to recover accidentally deleted disk files. Provides catalog of deleted as well as saved files.

CURRENT NOTES**Subscription/WAACE Membership Form**

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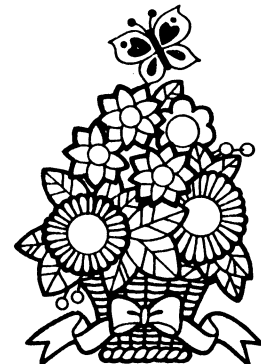
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Washington Area Atari Computer EnthusiastsAtari Users' Regional Association

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 Membership.... William Pimble. 341-9572
 Librarian..... William Schadt. 622-1547
 Hardware Coord Moe Sherman.... 593-1076

Meetings: 1st Wednesday of every month, 7:00 pm, Room One, Long Branch Public Library, Garland Avenue, East Silver Spring, MD. Take the Beltway (I-495) to Exit 29-B, South University Blvd. East, (Route 193). Follow University Blvd. East to 2nd light (Piney Branch Road), turn right on Piney Branch Road, continue to 2nd light (Arless Street), turn right on Arless past the apartments to Garland Avenue, turn right on Garland. The Long Branch Library is on the corner. Park in the library's lot.

New Members: Dues are \$15/year (includes \$12 subscription to Current Notes). Mail check, payable to AURA, to Treasurer, AURA, P.O. Box 7761, Silver Spring, MD 20907.

Capital Pro Micro-Users Group

President... Bob Kelly..... 301/839-7377
 VP-Commo.... Bob Danson..... 703/780-0758
 VP-Finances. Reg Brown..... 301/340-7943
 Disk Library Mike Abramowitz 301/983-2363
 Sysop..... Craig Smith....

CP/M Meetings. Capital Pro Micro-Users meetings are held at the Public Library in Oxon Hill, Maryland. The Library is located near the Woodrow Wilson Bridge just off the Washington beltway. From Virginia via the W.W. Bridge, stay on the beltway to Maryland exit #4 West (St. Barnabas Road). St. Barnabas Road merges with Oxon Hill Rd. (right turn at end of exit ramp); proceed 1/4 mile and Library will be on your left. The meetings are held in the Author Room. The Library telephone number is 301-839-2400.

New Members: Dues are \$15/year (includes a \$12 subscription to Current Notes) or \$3/year (no subscription). Send check, payable to John Lauer, to John Lauer, 8127 Heatherton Lane, Apt. 204, Vienna, VA 22180.

National Capital Atari Users' Group

President.. Frank Huband... 703/527-4770
 Treasurer.. Allen H. Lerman 301/460-0289
 Secretary.. Peter Kilcullen 202/296-5700
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 Programs... Art Corte..... 703/437-7860
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 Disk Lib... Abe Friedman... 703/920-4788
 Tape Lib... Bruce Ingalls.. 703/430-3287

Meetings. 3rd Tuesday of every month, 5:30-8:30, Room 543, National Science Foundation offices, 1800 G. Street NW, Washington, DC. The closest subway stop is Farragut West, on the Blue and Orange lines. Take the 18th Street exit, and walk south (against the flow of traffic) down 18th

Street for three blocks to G street. The building, on the corner of 18th and G, can be identified by a sign for the Madison National Bank on the corner. Parking is available in the building for a fee. The front entrance is on the west side of 18th street, between F and G.

New Members: Dues are \$15 (includes \$12 subscription to Current Notes). Send checks, payable to National Capital Atari Users Group, to Allen Lerman, 14905 Waterway Drive, Rockville, MD 20853.

Northern Virginia Atari Users Group

President..... Joe Waters..... 430-1215
 Vice President. Jim Stevenson.. 378-4093
 Treasurer..... Curtis Sandler. 734-9533
 Secretary..... G. Weatherhead. 938-4829
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 Membership..... Earl Lilley.... 281-9017
 Seminars..... Donna Yarbrough 255-3967
 Education..... Diana Burdt.... 425-5073
 Disk Librarian. M. Evan Brooks. 354-4482

Meetings: 2nd Sunday of each month, (although for MAY only: 3rd Sunday), 5:00-9:00, in the Large Auditorium at WASHINGTON GAS LIGHT, 6801 Industrial Road, Springfield VA. From Northwest: take beltway (495) to east on Braddock (620) to south on Backlick (617). From Northeast: Shirley Highway (395) to West on Edsall Road (648) to south on Backlick.) Take a left at the light by Industrial Road. Washington Gas Light is the second building on the right (very large with a huge parking lot in front).

New Members: Dues are \$15 (includes \$12 subscription to Current Notes). Send checks, payable to Novatari, to Curtis Sandler, 7213 Idylwood Ct., Falls Church, VA 22043.

Hoodbridge Atari Computer Users Group

President.... Jack Holtzhauer. 670-6475
 First VP..... Dave Marrantette 670-7675
 VP-Education. Tim Mitchell.... 221-7722
 VP-Liaison... Cecil Alton..... 670-4842
 Secretary.... Mike Stringer... 786-8755
 Treasurer.... John Thomas..... 670-8645
 Librarian.... Arnie Turk..... 670-2547

Meetings: Monthly, 7 - 10 pm, Community Room, Potomac Branch, Prince William County Library, Optiz Blvd., Woodbridge, VA. Meeting dates: Wed, MAY 15; and Wed, JUN 19. Entering Woodbridge from either North or South on Route #1, proceed to the intersection of Route #1 and Optiz Blvd. (adjacent to Woodbridge Lincoln-Mercury). Turn West onto Optiz and take first left turn into the library's parking lot. The Community Room is located to your left immediately upon entering the main building.

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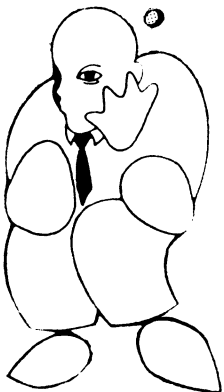
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